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BI's Annual Manual in three parts

- 1. Annual** — This section contains a review of what happened in the major segments of the beverage industry during the year. It includes charts and graphs detailing size of the industries, volumes, advertising expenditures, etc. The new product section contains a review of the many new products, new packages, services and literature offered to the trade during the year. Reader service numbers for more information make it easy for beverage producers to obtain details on these items which they may have missed when they were first introduced.
- 2. Manual** — In charts and graphs, this material is operational in nature and gives the bottler production and formulation details available nowhere else. A directory of industry associations, franchise companies and brand names is also offered.
- 3. Buyers' Guide** — Here the reader finds the industry's most complete directory of products and services. Complete addresses with telephone numbers is in the concluding section.

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Soft drinks reach new high in per capita consumption



Numbers are gals. per capita

Copyright: Beverage Industry
May 22, 1981

Despite a harsh economy, soft drink consumption in 1980 has secured a respectable 3% gain in volume. Beverage Industry research statistics director, John C. Maxwell, views the all-time high of 39.6 gallons per capita as continued consumer preference for cold and sweet drinks, moving away from the more hot and bitter beverages.

There seems to be no risk in stating that before long, soft drink consumption will exceed the historic 40-gallon highs of coffee.

Though even amidst this agreeable rising trend, Maxwell feels that the 2-L PET (polyethylene terephthalate) has still had an adverse effect on soft drink consumption. The 2-L PET, offering 67.2 ozs., affords comparatively less volume than the six-pack of 16 oz. bottles (96 ozs.) and six-pack cans (72 ozs.). "The consumption of soft drinks would have grown much faster had the 2-L PET not been in the market," Maxwell opined.

Compounding the 2-L PET vol-

ume problem is that of pricing. Offering the bottle at a lower cost, many bottlers are out-pricing higher volume packages. Maxwell feels that the price is bound to increase to a point where it could increase consumption as a result of a trade-off to cheaper but higher volume packages.

Bob Bohan, vice president of governmental affairs for the NSDA, said, "There is no information on the 2-L PET, in this matter, to draw any hard conclu-

Liquid Consumption Trends in the United States, 1970-80

(Gallons per capita per year)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Soft Drinks	27.0	28.8	30.3	31.7	31.7	31.2	34.2	36.5	37.8	38.9	39.6
Coffee*	35.7	35.3	35.2	35.1	33.8	33.0	29.9	28.1	27.1	28.0	27.8
Milk#	23.1	23.0	23.2	22.9	22.2	22.6	22.4	22.2	22.0	21.8	21.6
Beer	18.5	19.3	19.8	20.6	21.5	21.9	22.1	22.8	23.6	24.3	24.8
Tea	5.5	5.8	5.9	6.3	6.2	6.2	6.4	6.9	6.7	6.6	6.6
Powdered Drinks	NA	NA	NA	NA	NA	4.9	5.6	6.0	6.3	5.8	6.1
Juices#	5.2	5.7	6.1	6.1	6.2	6.9	6.9	6.9	6.6	6.7	6.7
Distilled Sprites	1.8	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Wine	1.3	1.5	1.6	1.7	1.7	1.7	1.8	1.9	2.0	2.2	2.3
Bottled Water	NA	1.1	NA	NA	NA	1.2	1.2	1.3	1.4	1.5	1.6
Subtotal	118.1	122.4	124.0	126.3	125.3	131.6	132.5	134.6	135.5	137.8	139.1
Imported Water Consumption†	64.4	60.1	58.5	56.2	57.2	50.9	50.0	47.9	47.0	44.7	43.4
Total	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5

*Coffee data is based on a three-year moving average to counterbalance inventory swings, thereby portraying consumption more realistically

†Includes all others

#USDA revisions as of 7/1/80

R = Revised

NA = Not available

Source: USDA; DSI; USDA; American Bottled Water Assn.; Lehman Brothers Kuhn Loeb Research estimates

Copyright: Beverage Industry
May 22, 1981

sions one way or the other." Bohan believes that in the long run, the use of a variety of new types of packages will not cause a roll back in consumption of soft drinks.

The shifting tastes of the American people from hot to cold drinks causes Bohan to believe that "the soft drink consumption trend will continue to increase in a gradual and steady manner, as in the past."

Suffering most from this shift in taste is coffee. Though coming in second to soft drinks in total consumption, coffee's 27.8 gallons per capita for 1980 dropped from last year's figure of 28.0. David Kuhnert, director of public relations for the National Coffee Association of U.S.A. said of the continued annual decrease that "this trend suggests a certain momentum."

many causes

Kuhnert does not see the answer to the decrease in coffee consumption as simply a changing of consumer tastes. "Soft drinks have replaced coffee as the number one beverage, that certainly does tell you something. But whatever the

reasons for the decrease, I think if there was only one cause, the major marketers could have isolated and halted the trend," said Kuhnert.

Cost, notes Kuhnert, is certainly not the cause. On a value basis, you get more for your money with a cup of coffee than you do with any other beverage, he observes.

Beer consumption for 1980 came in a strong third with 24.8 gallons per capita over last year's 24.3. Maxwell believes that industry production is likely to rise another 2.5% to 3% this year. "One of the difficulties in following the beer industry this year has been the inaccurate statistics issued by the IRS. For the most part, data is on the low side and the revisions made by the IRS have been upward. The industry may come in stronger than anticipated." Maxwell expects that for beer consumption, 1981 will be as good as or better than 1980.

Phil Katz, vice president of research for the United States Brewers Assn. said, "We expect in the next three to five years the growth of the beer industry will be about 2% to 3%, taking population figures into consideration, which will allow us to see the same steady in-

crease as we are experiencing now."

Certain shifts in beer consumption became apparent this year, such as malt liquor which showed good gains in 1980, according to Maxwell. Draft beer consumption is also rising compared to previous years, Katz explains. "The draft business rose 8% in 1979 and another 8% for 1980 at the expense of the packaged business." Katz does not see this trend causing a negative or adverse situation, in that packaged beer consumption accounts for approximately 88% of the market.

milk decreases

Milk saw another decrease in consumption for 1980 with 21.6 gallons per capita compared to 21.8 the previous year. John Brookman, director of communications for the National Dairy Council states that, "Americans consumed more dairy products per capita than the year before. On a total milk equivalent basis the consumer used more, but on a purely drinking basis there was a slight decline." In an effort to turn the liquid consumption

around, the National Dairy Council is promoting the product as a good nutritional buy, as well as a good economical buy.

Tea held steady this year compared with the previous year's figure of 6.6 gallons per capita. Again, the shift from hot to cold finds the tea industry with an ever expanding iced tea market of 68.1% as opposed to 31.9% for hot tea.

Don Wiederecht, executive director for the Tea Council of U.S.A., feels that, "One of the things that has accounted for the steady, yet modest growth is that tea is a flexible product." Looking to future growth in the cold drink market, Wiederecht believes the outlook to be very good for tea in the coming years. "We recognize that this country is a cold drink country 12 months out of the year. With the products in the form of liquid and canned tea, we hope to dovetail in the cold drink market," explained Wiederecht.

Powdered drinks gained some ground this year with 6.1 gallons per capita as opposed to last year's figure of 5.8 gallons per capita.

juice holds steady

Juices held steady despite a lack of growth in per capita consumption. This year, like last, saw juice consumption at 6.7 gallons per capita. Joseph Brady, marketing research analyst for the Florida Dept. of Citrus commented, "In the future I feel our share will increase not much more than it has on our present course."

Brady feels with the innovation

of new packaging techniques, such as the Brik Pak, there could be a definite increase in juice consumption. Brady explains, "The Brik Pak is a flexible container similar in shape to the pure pack container without the gable on top. This type of packaging, because of the way it is processed, need not be refrigerated and has a long shelf life." With this packaging technique finding acceptance in Europe and recently in Canada, Brady feels that with packaging innovations and an expanding orange drink and fruit punch market, there may soon be a substantial increase.

Data on the consumption of distilled spirits suggest that in 1980 the liquor industry experienced little or no growth at 2 gallons per capita. Maxwell feels that there are some basic factors working against the industry. "One is that people seem to be drinking less alcoholic beverages and the growth rate of the total alcoholic beverage industry is diminishing. Another is the liquor industry's aggressive pricing. The economy is probably a third factor."

Duncan Cameron, director of

public and trade relations for the Distilled Spirits Council of U.S. agrees with Maxwell's findings but takes issue with the mentioning of overly aggressive pricing. Cameron believes, "The distilled spirits industry has been very stable in their pricing and may even be called an inflation fighter. During the period of 1974 to 1979 prices for distilled spirits retail increased 14.8% compared with the consumer price index in the same period of 47.2%." Cameron feels that as an industry, distilled spirits pricing has remained conservative.

Along with the stagnating distilled spirits consumption, wine for 1980 was only able to grow a minimal amount from 2.2 to 2.3 gallons per capita. Maxwell echoes those words spoken for distilled spirits. "If you look to the past, liquor consumption was growing around 7% and wine was growing around 15%. Now, per capita consumption has leveled out to approximately two gallons. Though suffering with distilled spirits consumption, domestic wines did show a respectable 2.5% increase for the year. Imported wines took a more impressive gain of 10.1% for 1980.

Bottled water consumption continued to grow in strength, reaching 1.6 gallons for 1981. Considering that just six years ago figures on per capita consumption were not even available, this industry has reflected a definite shift in consumer tastes.

Looking to the future is never an easy or safe task, but Maxwell, as well as others in the field, feel that the beverage industry, barring few exceptions, will experience continued steady growth for the coming years.

	1979	1980	1981	1982
Iced Tea	45.0	48.0	50.0	52.0
Hot Tea	12.0	12.0	12.0	12.0
Total	57.0	60.0	62.0	64.0

U.S. population demographics

U.S. population trends and projections by age groups

(In thousands)

	Total, all ages	Under 5 years	5-13 years	14-17 years	18-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65 years and over	18 years and over
1970	204,878	17,148	36,636	15,910	24,687	25,294	23,142	23,310	18,664	20,087	135,184
1975	213,559	15,879	33,440	16,934	27,604	30,919	22,816	23,769	19,777	22,420	147,306
1978	218,548	15,361	31,378	16,637	28,867	33,777	24,320	23,177	20,668	24,054	154,682
Percent of total											
1970	100.0%	8.4%	17.9%	7.8%	12.1%	12.3%	11.3%	11.4%	9.1%	9.8%	66.0%
1975	100.0	7.4	15.7	7.9	12.9	14.5	10.7	11.1	9.3	10.5	69.0
1978	100.0	7.0	14.4	7.6	12.2	15.5	11.2	10.6	9.5	11.0	71.0
Projections:											
1985	232,880	18,803	29,098	14,392	27,853	39,859	31,376	22,457	21,737	27,305	170,587
1990	243,513	19,437	32,568	12,771	25,149	41,086	36,592	25,311	20,776	29,824	178,737
2000	260,378	17,852	35,080	16,045	24,653	34,450	41,344	35,875	23,257	31,822	191,400
Percent of total											
1985	100.0%	8.1%	12.5%	6.2%	12.0%	17.1%	13.5%	9.6%	9.3%	11.7%	73.3%
1990	100.0	8.0	13.4	5.2	10.3	16.9	15.0	10.4	8.5	12.2	73.4
2000	100.0	6.9	13.5	6.2	9.5	13.2	15.9	13.8	8.9	12.2	73.5

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September 15, 1981

Source: U.S. Dept. of Commerce

Population by age groups states and regions: 1978

(Thousands)

	Total	Under 5 years	5-13 years	14-17 years	18-24 years	25-44 years	45-64 years	65 years and over	% of Total 18 years and over	25-44 age group
United States	218,059	15,361	31,378	16,637	28,687	58,097	43,845	24,054	70.9%	26.6%
New England	12,256	721	1,729	940	1,605	3,257	2,554	1,451	72.3	26.6
Maine	1,091	76	161	87	138	274	223	133	70.3	25.1
New Hampshire	871	58	128	69	109	242	169	96	70.7	27.8
Vermont	487	34	73	38	65	134	88	55	70.2	27.5
Massachusetts	5,774	326	802	440	778	1,530	1,198	700	72.8	26.5
Rhode Island	935	54	132	70	121	236	203	120	72.7	25.2
Connecticut	3,099	173	433	236	394	841	674	347	72.8	27.1
Middle Atlantic	36,825	2,262	5,144	2,731	4,467	9,649	8,193	4,380	72.5	26.2
New York	17,748	1,096	2,486	1,309	2,166	4,724	3,873	2,095	72.4	26.6
New Jersey	7,327	452	1,044	559	868	1,932	1,648	824	72.0	26.4
Pennsylvania	11,750	715	1,614	863	1,433	2,993	2,672	1,461	72.8	25.5
East North Central	41,233	2,901	6,144	3,220	5,494	10,988	8,178	4,308	69.6	26.6
Ohio	10,749	743	1,594	822	1,429	2,863	2,173	1,125	70.6	26.6
Indiana	5,374	393	811	420	709	1,434	1,044	564	69.8	26.7
Illinois	11,243	801	1,641	863	1,464	2,984	2,283	1,206	70.6	26.5
Michigan	9,189	649	1,420	731	1,263	2,488	1,771	867	69.5	27.1
Wisconsin	4,679	315	678	384	629	1,219	907	546	70.5	26.1
West North Central	17,018	1,183	2,393	1,341	2,259	4,393	3,312	2,138	71.1	25.8
Minnesota	4,008	274	584	327	550	1,074	735	463	70.4	26.8
Iowa	2,896	198	410	233	361	736	580	378	71.0	25.4
Missouri	4,860	330	673	369	634	1,264	961	629	71.8	26.0
North Dakota	652	50	93	55	90	157	128	78	69.6	24.1

(Continued)

Population by age groups states and regions: 1978 (Continued)

(Thousands)

	Total	Under 5 years	5-13 years	14-17 years	18-24 years	25-44 years	45-64 years	65 years and over	% of Total 18 years and over	25-44 age group
South Dakota	690	54	98	57	92	160	139	89	69.6	23.2
Nebraska	1,565	113	219	124	209	397	301	202	70.9	25.4
Kansas	2,348	164	315	176	323	605	469	297	72.1	25.8
South Atlantic	34,579	2,396	4,913	2,574	4,611	9,227	6,879	3,978	71.4	26.7
Delaware	583	39	85	45	84	159	115	55	70.8	27.3
Maryland	4,143	252	604	327	579	1,178	834	370	71.4	28.4
D.C.	674	41	91	44	101	194	129	73	73.7	28.8
Virginia	5,148	344	731	394	758	1,439	1,014	468	71.5	28.0
West Virginia	1,860	139	266	135	212	478	408	223	71.0	25.7
North Carolina	5,577	401	821	417	757	1,538	1,093	550	70.6	27.6
South Carolina	2,918	233	452	233	410	792	539	258	68.5	23.7
Georgia	5,084	397	791	390	696	1,413	924	473	69.0	27.8
Florida	8,594	549	1,073	589	1,014	2,036	1,823	1,510	74.3	23.7
East South Central	14,001	1,076	2,102	1,092	1,808	3,667	2,713	1,543	69.5	26.2
Kentucky	3,498	267	515	270	456	923	680	388	70.0	26.4
Tennessee	4,357	312	627	329	554	1,181	876	478	70.9	27.1
Alabama	3,742	283	563	293	486	975	732	408	69.5	26.1
Mississippi	2,404	213	396	200	312	588	425	269	66.3	24.5
West South Central	22,046	1,787	3,320	1,712	2,951	5,847	4,145	2,285	69.1	26.5
Arkansas	2,186	169	315	168	259	553	428	293	70.1	25.3
Louisiana	3,966	332	637	331	545	1,029	721	370	67.2	25.9
Oklahoma	2,880	215	396	213	370	756	574	357	71.4	26.3
Texas	13,014	1,071	1,972	1,000	1,777	3,509	2,422	1,264	68.9	27.0
Mountain	10,289	912	1,540	816	1,430	2,719	1,906	966	68.2	26.4
Montana	785	61	112	66	103	202	159	81	69.4	25.7
Idaho	878	84	132	70	113	224	166	87	67.3	25.5
Wyoming	424	37	61	33	57	112	87	36	68.9	26.4
Colorado	2,670	205	377	205	396	770	484	232	70.5	28.8
New Mexico	1,212	107	192	106	173	309	222	104	66.6	25.5
Arizona	2,354	205	348	182	306	599	443	269	68.7	25.4
Utah	1,307	161	221	102	195	322	205	102	63.0	24.6
Nevada	660	50	96	52	87	181	139	55	70.0	27.4
Pacific	29,811	2,124	4,094	2,214	4,058	8,351	5,964	3,005	71.7	28.0
Washington	3,774	263	528	288	508	1,064	721	401	71.4	28.2
Oregon	2,444	178	331	180	307	670	493	285	71.8	27.4
California	22,294	1,568	3,034	1,643	3,026	6,258	4,522	2,243	72.0	28.1
Alaska	403	41	69	35	74	117	57	10	64.0	29.0
Hawaii	897	75	132	68	143	242	171	66	69.3	27.0

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Source: U.S. Dept. of Commerce

Soft drink sales up despite sluggish economy



The top ten soft drink brands, arranged by rank above show Dr Pepper has overtaken 7Up as the number 3 seller.

Despite a sluggish 1980 economy, the Dr Pepper Co. saw its flagship brand become the number three soft drink brand in the United States, pushing past 7UP. Also, Sugar Free Dr Pepper, up from 62.9 million cases sold in 1979 to 69.1 million in '80, jumped into the number 10 position, passing Diet 7UP. With those brand moves, Dr Pepper Co. is now the number three beverage company, displacing Seven-Up Co., according to Beverage Industry Director of Research/Statistics John Maxwell.

In '80, the soft drink industry grew 3.1% to an approximate 5.9

billion case volume, up from '79's 5.7 billion cases. Healthy unit gains within the industry brought '80 soft drink consumption to an all-time high of 39.6 gallons per capita, Maxwell reports.

"We continue to believe that this is the favored beverage type of the U.S. population, and will continue to be for the foreseeable future. Consumers appear to be switching away from alcoholic beverages and other products, particularly in the hot and arid areas, and into soft drinks. Thus it should not be too long before soft drink consumption exceeds the historic highs of coffee,

which were in the 40 gallons-plus area," Maxwell predicts.

Leader Coca-Cola increased company business by 4.4%, up nearly 90 million cases, reversing a trend that saw the company's flagship brand slip in market share in recent years. Coke now holds a 24.3% share of total market, up from 23.9% in '79.

Number two Pepsi-Cola increased its unit volume sales by 4.2%, improving the market share of its flagship brand by .1 of a percent to 18%.

However, out of the top eight soft drink companies, Dr Pepper

Top ten drinks									
1978			1979			1980			
Mil.	Pct.		Mil.	Pct.		Mil.	Pct.		
Cases	Market	Change	Cases	Market	Change	Cases	Market	Change	
1,335.0	24.3	3.5	1,365.0	23.9	2.2	Coca-Cola	1,425.0	24.3	4.4
969.0	17.6	7.3	1,022.0	17.9	5.5	Pepsi-Cola	1,056.0	18.0	3.3
299.5	5.4	7.7	311.5	5.5	4.0	Dr Pepper	323.0	5.5	3.7
322.0	5.9	2.2	320.0	5.6	(0.6)	Seven-Up	317.0	5.4	(0.9)
149.0	2.7	8.8	170.0	3.0	14.1	Tab	188.0	3.2	10.6
158.0	2.9	5.3	165.0	2.9	4.4	Sprite	171.0	2.9	3.6
130.0	2.4	30.0	156.0	2.7	20.0	Mountain Dew	169.0	2.9	8.3
164.0	3.0	(2.4)	159.0	2.8	(3.0)	Royal Crown Cola	163.0	2.8	2.5
127.0	2.3	16.5	142.0	2.5	11.8	Diet Pepsi	154.0	2.6	8.5
60.5	1.1	16.3	62.9	1.1	4.0	Sugar Free Dr Pepper	69.1	1.2	9.9
3,714.0	67.6	6.1	3,873.4	67.9	4.3	Total	4,035.1	68.8	4.3

Source: Lehman Brothers Kuhn Loeb Research
Case: 24 pack, 8 oz. containers

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Consumption of soft drinks by company

1976		1977		1978		1979		1980		
Mil. Cases	Pct. Market	Mil. Cases	Pct. Market	Mil. Cases	Pct. Market	Mil. Cases	Pct. Market	Mil. Cases	Pct. Market	1979-80 Change
Coca-Cola Company										
1,190.0	24.3%	1,290.0	24.5%	1,335.0	24.3%	1,355.0	23.9%	1,425.0	24.3%	1.4%
130.0	2.7	150.0	2.8	158.0	2.9	165.0	2.9	171.0	2.9	3.8
125.0	2.6	137.0	2.6	149.0	2.7	170.0	3.0	188.0	3.2	10.6
112.0	2.3	119.0	2.3	112.0	2.0	107.0	1.9	98.0	1.7	(8.4)
37.0	0.7	45.0	0.8	46.0	0.8	43.0	0.8	39.0	0.7	(9.3)
31.0	0.6	28.0	0.5	27.0	0.5	25.0	0.4	26.0	0.4	4.0
—	—	—	—	—	—	36.0	0.7	50.0	0.8	31.8
10.0	0.2	15.0	0.3	19.0	0.4	23.0	0.4	25.0	0.4	8.7
1,038.0	22.1	1,134.0	23.2	1,186.0	23.2	1,200.0	24.0	1,222.0	24.2	2.1
PepsiCo, Inc.										
830.0	17.0	903.0	17.2	969.0	17.6	1,022.0	17.9	1,056.0	17.9	3.3
73.0	1.5	100.0	1.9	130.0	2.4	156.0	2.8	169.0	2.9	8.3
90.0	1.9	109.0	2.1	127.0	2.3	142.0	2.5	154.0	2.6	8.5
25.0	0.5	27.0	0.5	22.0	0.4	24.0	0.4	24.0	0.4	—
12.1	0.2	12.6	0.2	14.0	0.3	15.0	0.3	15.0	0.3	—
15.3	0.3	20.3	0.4	19.0	0.3	18.0	0.3	17.0	0.3	(5.6)
045.4	21.4	1,171.9	22.3	1,281.0	23.3	1,377.0	24.2	1,435.0	24.4	4.2
Dr Pepper Company										
243.0	5.0	278.0	5.3	299.5	5.4	311.5	5.5	323.0	5.5	3.7
39.0	0.8	52.0	1.0	60.5	1.1	62.9	1.1	69.1	1.2	9.9
282.0	5.8	330.0	6.3	360.0	6.5	374.4	6.6	392.1	6.7	4.7
Seven-Up Company										
305.8	6.3	315.0	6.0	322.0	5.9	320.0	5.6	317.0	5.4	(0.9)
60.0	1.2	62.3	1.2	63.0	1.1	63.6	1.1	64.0	1.1	0.6
10.0	0.2	10.5	0.2	10.2	0.2	10.0	0.2%	9.0	0.2	(10.0)
1.3	—	1.2	—	1.0	—	1.0	—	1.0	—	—
377.1	7.7	389.0	7.4	396.2	7.2	394.6	6.9	391.0	6.7	(0.9)
Royal Crown Companies										
162.2	3.3	168.0	3.2	164.0	3.0	159.0	2.8	163.0	2.8	2.5
40.6	0.8	40.6	0.8	40.2	0.7	38.0	0.7	40.5	0.7	6.6
55.6	1.2	53.0	1.0	53.5	1.0	53.0	0.9	50.0	0.8	(5.7)
258.4	5.3	261.6	5.0	257.7	4.7	250.0	4.4	253.5	4.3	1.4
Crush International										
136.4	2.8	150.7	2.9	169.6	3.1	180.0	3.4	186.3	3.2	3.5
19.5	0.4	23.0	0.4	24.0	0.4	25.0	0.5	25.9	0.4	3.6
155.9	3.2	173.7	3.3	193.6	3.5	205.0	3.6	212.2	3.6	3.5
Canada Dry Corp.										
52.4	1.1%	52.7	1.0%	55.0	1.0%	56.7	0.9%	60.2	1.0	6.2%
25.2	0.5	25.2	0.5	25.0	0.5	26.5	0.5	26.8	0.4	1.1
19.0	0.4	19.0	0.4	18.0	0.3	20.7	0.4	27.0	0.5	30.4
—	—	15.0	0.3	15.0	0.3	15.5	0.3	15.3	0.3	(1.3)
5.5	0.1	5.5	0.1	5.5	0.1	5.0	0.1	4.0	0.1	(20.0)
45.0	0.9	42.5	0.8	40.0	0.7	38.0	0.7	31.0	0.5	(18.4)
147.1	3.0	158.9	3.1	168.5	2.9	162.4	2.8	164.3	2.8	1.2

(Continued)

1976		1977		1978		1979		1980		
Mil. Cases	Pct. Market	Mil. Cases	Pct. Market	Mil. Cases	Pct. Market	Mil. Cases	Pct. Market	Mil. Cases	Pct. Market	1979-80 Change
Moxie Incorporated										
Monarch Company										
21.8	0.4	21.9	0.4	23.2	0.4	19.0	0.3	Nesbitts	18.0	0.3 (5.3)
NA	—	NA	—	NA	—	15.0	0.3	Frostie Root Beer	16.0	0.3 6.7
12.8	0.3	13.8	0.3	15.1	0.3	14.3	0.2	NuGrape	14.4	0.2 0.7
7.2	0.2	8.3	0.2	9.3	0.2	8.9	0.2	Sun Crest Orange	8.5	0.2 (4.5)
1.8	—	2.0	—	2.2	—	2.2	—	Moxie	2.2	— —
NA	—	0.6	—	1.0	—	0.7	—	Kickapoo Joy Juice	NA	— —
4.0	0.1	4.2	0.1	4.3	0.1	3.9	0.1	Mason's Root Beer	3.5	0.1 (10.3)
2.0	—	2.2	—	2.5	—	2.1	—	Flavette	1.9	— (9.5)
0.7	—	0.8	—	2.4	—	2.0	—	Dr. Wells	1.8	— (10.0)
22.6	0.5	24.6	0.5	26.9	0.5	31.9	0.6	Other	33.0	0.6 3.4
72.9	1.5	78.4	1.5	86.9	1.5	100.0	1.7	Total	99.3	1.7 (0.7)
Consolidated Chocolate Co.										
—	—	2.1	—	2.4	—	2.6	0.1	Chocolate Soldier	2.7	0.1 3.8
—	—	1.0	—	1.3	—	1.4	—	Brownie	1.4	— —
—	—	1.3	—	1.8	—	1.9	—	Choc-ola	2.0	— 5.3
—	—	4.0	0.1	4.5	0.1	4.7	0.1	Other	4.9	0.1 4.3
6.7	0.1	8.4	0.1	10.0	0.2	10.6	0.2	Total	11.0	0.2 3.8
79.6	1.6	86.8	1.6	96.9	1.7	110.6	1.9	Grand Total	110.3	1.9 (0.3)
95.0	1.9	103.1	2.0	106.5	1.9	100.0	1.7	Shasta Beverages#	105.0	1.8 5.0
28.4	0.6	35.5	0.7	43.0	0.8	55.8	1.0	Cadbury Schweppes USA, Inc.	64.8	1.1 16.1
29.5	0.6	40.0	0.8	46.2	0.8	54.0	0.9	A & W Beverages	58.0	1.0 7.4
Cott Corporation										
67.0	1.4%	65.0	1.2%	60.0	1.1	57.0	1.0	Squirt Company	54.5	0.9 (4.4)
36.4	0.7	37.0	0.7	40.0	0.7	47.6	0.8	Double Cola Co.	53.8	0.9 13.0
31.3	0.6	33.5	0.6	35.8	0.7	39.1	0.7	Welch's (Welch Foods)	39.9	0.7 2.0
9.0	0.2	18.0	0.3	31.0	0.6	31.0	0.5	Frank's Beverages	30.0	0.5 (3.2)
27.9	0.6	28.4	0.5	29.0	0.6	29.0	0.5	Faygo	29.5	0.5 1.7
22.3	0.4	27.3	0.5	26.1	0.5	23.9	0.4	No-Cal	22.1	0.4 (7.5)
23.8	0.5	22.4	0.4	22.4	0.4	22.4	0.4	Big K (Kroger)	21.0	0.4 (6.3)
13.5	0.3	14.4	0.3	16.0	0.3	17.0	0.3	Barq's	17.5	0.3 2.9
NA	—	NA	—	7.9	0.1	11.6	0.2	Cragmont (Safeway)	13.9	0.2 19.8
12.8	0.3	12.5	0.2	12.5	0.2	12.5	0.2	Chek (Winn-Dixie)	12.8	0.2 2.4
12.8	0.2	13.3	0.2	12.0	0.2	11.0	0.2	Yoo Hoo	10.5	0.2 (4.5)
10.0	0.2	10.0	0.2	11.0	0.2	11.0	0.2	Cotton Club	10.4	0.2 (5.5)
7.2	0.1	8.2	0.2	8.5	0.2	8.0	0.1	King Cola	8.0	0.1 —
—	—	—	—	—	—	—	—	Yukon (A&P)	7.0	0.1 —
NA	—	NA	—	NA	—	2.6	0.1		2.9	— (3.6)
4,448.8	91.1	4,800.7	92.8	5,180.4	100.0	5,395.0	98.7	Grand Total	5,875.0	96.3 3.7
4,890.0	100.0	5,259.0	100.0	5,500.0	100.0	5,700.0	100.0	Grand Total	5,875.0	100.0 3.1%

Source: Lehman Brothers Kuhn Loeb Research
Case: 24 pack, 8 oz. containers

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Cola consumption*

1977		1978			1979			Company	1980		
Mil.	Total	Mil.	Total	Pct. Change	Mil.	Total	Pct. Change		Mil.	Total	Pct. Change
1,427.0	43.5	1,484.0	43.3	4.0	1,535.0	43.2	3.4	Coca Cola	1,613.0	44.0	5.1
1,039.0	31.7	1,118.0	32.6	7.6	1,188.0	33.5	6.3	PepsiCo	1,234.0	33.6	3.9
208.6	6.4	204.2	6.0	(2.1)	197.0	5.5	(3.5)	Royal Crown	203.5	5.5	3.3
2,674.6	81.6	2,806.2	81.9	4.9	2,920.0	82.2	4.1	Subtotal	3,050.5	83.1	4.5
605.4	18.4	620.8	18.1	2.5	631.0	17.8	1.6	All Others	619.5	16.9	(1.8)
3,280.0	100.0	3,427.0	100.0	4.5	3,551.0	100.0	3.6	Total	3,670.0	100.0	3.4

*Includes diet colas

Source: Lehman Brothers Kuhn Loeb Research
Case: 24 pack, 8 oz. containers

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Estimated market share by type*

1970	1971	1972	1973	1974	1975	1976	1977	1978	1979		1980
63.0%	63.0%	63.0%	62.5%	61.7%	62.1%	62.2%	62.4%	62.3%	62.3%	Cola	62.4%
12.0	12.0	12.0	12.5	12.8	12.9	12.7	12.4	12.3	12.1	Lemon-Lime	11.8
3.9	3.9	4.6	5.0	5.2	5.3	6.7	7.3	7.7	7.9	Pepper Type	8.0
8.3	8.4	8.4	8.2	8.0	7.9	7.8	7.4	7.4	7.3	Orange	7.4
4.5	5.0	5.0	5.0	5.2	5.2	5.2	5.3	5.4	5.5	Root Beer	5.5
8.4	7.7	7.0	6.8	7.1	6.6	5.4	5.2	4.9	4.9	All Others	4.9
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	Total	100.0%

Source: Lehman Brothers Kuhn Loeb Research
Case: 24 pack, 8 oz. containers

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Diet soft drink consumption*

1977		1978			1979			Company	1980		
Mil.	Total	Mil.	Total	Pct. Change	Mil.	Total	Pct. Change		Mil.	Total	Pct. Change
95.0	27.9	126.0	27.3	3.7	185.0	28.3	10.9	Coca-Cola	214.0	28.3	6.7
109.0	18.5	127.0	21.2	18.5	142.0	21.1	11.5	Pepsi-Cola	154.0	21.2	6.5
32.0	6.8	60.5	8.0	16.3	55.5	9.3	4.0	Dr Pepper	62.0	9.5	2.2
32.3	10.0	63.0	10.0	1.1	63.5	9.3	1.0	Sprite	64.0	9.3	0.6
40.6	6.3	40.2	6.4	(1.2)	38.0	6.7	(6.9)	Royal Crown Cola	40.5	6.8	6.6
7.2	1.2	7.0	3.1	(2.8)	8.5	1.0	(17.9)	Diet A	6.7	9.3	1.1
436.1	73.9	479.7	55.2	8.6	506.0	75.4	7.2	Subtotal	540.4	75.5	7.9
133.9	26.1	156.3	24.8	1.6	146.0	21.5	6.2	All Others	177.7	24.5	7.9
569.0	100.0	636.0	100.0	6.8	652.0	100.0	7.6	Total	718.1	100.0	7.7

*Includes Tab and Fresca

Source: Lehman Brothers Kuhn Loeb Research
Case: 24 pack, 8 oz. containers

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percentage points greater than PepsiCo's 24.4% market share, which was up .2 of 1%. Coca-Cola Co.'s diet Tab brand, after previous year-to-year increases of between 2 and 3%, posted an impres-

sive 10.6% unit volume growth from '79 to '80, further securing its number five position among the top 10 soft brands and widening the gap between it and the number two diet drink, Diet Pepsi. PepsiCo's

Diet Pepsi retained its number nine slot behind Royal Crown Cola and well ahead of Sugar Free Dr Pepper with an 8.5% increase in unit volume to 154 million cases.

In its second year, Coca-Cola

Lemon-lime consumption*

1977		1978			1979			Company	1980		
Mil.		Mil.	Pct.		Mil.	Pct.			Mil.	Pct.	
Cases	Total	Cases	Total	Change	Cases	Total	Change	Cases	Total	Change	
377.3	58.0	385.0	56.9	2.0	383.6	55.6	(0.4)	Seven-Up	381.0	54.0	(0.7)
150.0	23.1	158.0	23.3	5.3	165.0	23.9	4.4	Coca-Cola	171.0	24.3	3.6
12.6	1.9	14.0	2.0	11.1	15.0	2.2	7.1	PepsiCo	15.0	2.1	—
539.9	83.0	557.0	82.2	3.2	563.6	81.7	1.2	Subtotal	567.0	80.4	0.6
110.1	17.0	120.0	17.8	9.0	126.4	18.3	5.3	All Others	138.0	19.6	9.2
650.0	100.0	677.0	100.0	4.2	690.0	100.0	1.9	Total	705.0	100.0	2.2

*Does not include Hill Billy drinks or Fresca

Source: Lehman Brothers Kuhn Loeb Research

Case: 24 pack, 8 oz. containers

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Per capita consumption of soft drinks

	Million Cases Consumed	Gallons Per Capita
1980	5,875.0	39.6
1979	5,700.0	38.9
1978	5,500.0	37.8
1977	5,260.0	36.5
1976	4,890.0	34.2
1975	4,460.0	31.2
1974	4,460.0	31.7
1973	4,440.0	31.7
1972	4,200.0	30.3
1971	3,950.0	28.8
1970	3,675.0	27.0
1969	3,475.0	25.9
1968	3,300.0	24.9
1967	3,100.0	23.6
1966	2,900.0	22.3
1965	2,625.0	20.4
1964	2,430.0	19.1
1963	2,245.0	17.9

Source: Lehman Brothers Kuhn Loeb Research
Case: 24 pack, 8 oz. containers

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Co.'s Mello Yello continued strong, up to 50 million cases, a 31.6% increase over its debut year. Fresca brand also did well, case volume gains up 1 million, reversing losses of 3 million cases over the previous three years. The only Coca-Cola Co. brands that lost ground last year were its Fanta brand and its Mr. Pibb (pepper) brand. Both had declined in sales from '78 to '79 as well.

Pepsi's Pepsi Light and Teem showed no growth during '80, remaining at 24 million and 15 million case levels, respectively.

Seven-Up Co., which was acquired by Philip Morris in '78, now the number four company in the

industry, lost ground for the second straight year. Its total volume was off 0.9%, down more than 3 million cases from '79. Its flagship brand lost 0.2% in market share, enabling Dr Pepper to step out in front — Dr Pepper has a 5.5% share compared to 7UP's 5.4%. 7UP unit volume dipped 3 million cases to 317 million cases.

In a year that saw excellent diet soft drink consumption growth, the company's Diet 7UP brand managed only a 0.6% growth, dropping out of the top 10 best selling brands. The company's Dixie Cola was off 10%, volume dropping to 9 million cases from '79's 10 million case level.

The number four company in the industry, Royal Crown Co., turned in a 1.4% '80 growth, it's first gains since 1977. Its Diet Rite and caffeine-free RC 100 were up 6.6% to a 40.5 million case level. Royal Crown, its flagship brand, was up 2.5%, retaining its '79 2.8% share of market, but watched as Mountain Dew hopped over it into the seventh slot.

Crush International posted a 3.5% gain with total volume at 212 million cases, and the Canada Dry Corp. turned in a 1.2% growth, with its Club Soda up a remarkable 30.4%, principally because it is being consumed by many bottled water users. Its Ginger Ale showed a healthy 6.2% growth. Its Wink brand, which was debuted in '77, was off sharply — down 20% to a 4 million case sales level.

Moxie Inc.'s Monarch Co., which acquired Frostie Root Beer in late '79, was off 0.7% to 99.3 million cases. Its Nesbitts brand fell 5.3%, Frostie was up 6.7%, Nu-Grape up 0.7% and Sun Crest Orange was down 4.5%. Moxie's other beverage company, Consolidated Chocolate Co. showed a 3.8% growth behind its Chocolate Soldier brand (up 3.8% to 2.7 million cases) and its Choc-ola brand (up 5.3% to 2 million cases).

Shasta Beverages, a division of Consolidated Foods Corp., showed good growth last year, volume at 105 million cases, up 5%. Cadbury Schweppes USA, Inc., with its Schweppes brand and growing Rhondo brand, posted an impres-

NSDA production and consumption of soft drinks

Year	Total Value \$ (Wholesale)	Total Cases (288 ounce)	Per capita (12 oz. containers)
1849	760,000	1,013,300	1.1
1859	1,415,000	1,886,700	1.5
1869	4,222,000	5,629,300	4.3
1879	4,742,000	6,322,700	3.0
1889	14,354,000	17,398,800	6.6
1899	23,269,000	25,854,450	8.1
1909	43,508,000	41,436,200	10.8
1919	135,341,000	112,784,100	25.6
1929	214,322,238	181,618,990	35.4
1939	361,690,917	321,997,120	59.1
1945	584,994,000	487,495,000	88.6
1946	617,168,000	514,307,200	88.2
1947	745,676,000	601,109,300	100.6
1948	835,157,300	673,242,500	109.6
1949	860,959,300	675,262,200	108.0
1950	876,532,600	667,834,300	105.3
1951	939,442,500	695,883,300	108.5
1952	1,019,295,000	755,033,300	116.0
1953	1,089,513,000	785,234,700	118.3
1954	1,166,605,000	784,449,300	116.1
1955	1,252,276,000	843,283,300	122.8
1956	1,308,000,000	880,809,300	125.9
1957	1,347,241,500	907,233,300	126.1
1958	1,427,463,500	906,326,000	124.3
1959	1,633,015,900	989,706,700	133.2
1960	1,698,025,600	984,362,700	128.0
1961	1,829,083,200	1,016,157,300	132.2
1962	2,001,016,800	1,111,676,000	142.3
1963	2,341,189,000	1,200,601,000	151.6
1964	2,533,167,000	1,299,060,000	161.9
1965	2,735,567,000	1,402,854,700	172.7
1966	3,175,980,000	1,568,391,300	191.3
1967	3,458,632,000	1,646,968,000	198.7
1968	4,165,552,000	1,851,356,700	221.1
1969	4,369,664,000	1,942,073,300	229.6
1970	4,799,784,000	2,064,423,300	241.9
1971	5,346,960,000	2,235,743,300	258.7
1972	5,683,820,000	2,360,944,700	270.9
1973	6,223,156,500	2,514,406,700	286.4
1974	7,827,131,000	2,532,007,300	286.3
1975	9,397,797,600	2,610,499,300	292.7
1976	10,375,167,000	2,952,474,700	328.7
1977	11,526,810,000	3,247,722,000	359.0
1978	13,344,588,000	3,490,000,000	382.7
1979	14,872,628,000	3,664,300,000	399.6
1980	17,676,648,000	3,816,575,000	409.6

Note: 1980 Resident Population 223,600,000 U.S. Department of Commerce, Bureau of the Census. For purposes of the report, all soft drink sales are converted to gallons and expressed in cases of 24 12-oz. containers. Prior to 1977 the standard case was 24 8-oz. containers. This change has been made to more accurately reflect the average size container.

sive 16.1% gain.

A&W Beverages, a subsidiary of United Brands Co., upped unit volume sales to 58 million cases, a 7.4% increase over '79. Dad's Root Beer Co., makers of Dad's Root Beer, Bubble Up and Diet Dad's, showed a 1.6% growth in '80 to 56.4 million cases.

Among the smaller companies, Barq's, a root beer, turned in a 19.8% growth, the highest in the industry. The Squirt Co. tallied substantial gains, up 13% last year. The Cott Corp., Welch's, Faygo, No-Cal and Yoo Hoo were off last year.

Sunkist, which grew dramatically in '80, is estimated to be in the 60-65 million case area, though accurate figures aren't in yet, Maxwell says. Sunkist could well be the 11th or 12th best selling brand.

In yet another excellent year, diet soft drink consumption was up 7.7% to 726 million cases from '79's 674 million. The top six companies that have diet drinks — Coca-Cola, PepsiCo., Dr Pepper, Seven-Up, Royal Crown Cola and Dad's — all showed gains with their diet brands.

John Scully, vice president of PepsiCo., Inc., believes the reason for the recent upsurge in diet soft drink consumption over recent years is because Americans who were the products of the post-WWII baby boom are now in their late 30s and are less apt to drink a sugared product.

Maxwell says that '81 numbers "should be at least as good . . . With its new management team, Coca-Cola should become even more aggressive in the marketing field, and it may depend less on promotions for its unit gains. Both Pepsi and Dr Pepper already have good marketing programs that are continuing to pay off," Maxwell continues, "and together with 7UP's turnaround (Maxwell says that with Philip Morris investing more capital in the company, Seven-Up made fourth quarter and early '81 progress), we feel that this should improve overall industry unit volume over the coming years. Strong marketing acumen among top companies in a given industry basically has the propensity to accelerate industry growth."

Estimated domestic share of market in food stores for major soft drink brands

	1977	1978	1979	1980	1977-80 Share gain
Coke	21.7%	21.7%	21.4%	21.7%	0.0%
Tab	2.9	3.0	3.4	3.8	0.7
Sprite	1.8	1.7	1.9	1.9	0.3
Freeca	0.8	0.9	0.8	0.8	(0.1)
Mello Yello	—	—	0.4	0.6	0.6
Diet Sprite	—	0.2	0.4	0.4	0.4
Total 6 Coke Brands	27.1%	27.5%	28.3%	29.0%	1.9%
Pepsi	22.1%	22.6%	22.7%	22.3%	0.2%
Diet Pepsi	2.9	3.2	3.4	3.5	0.6
Mountain Dew	1.5	2.0	2.5	2.8	1.3
Pepsi Light	1.0	0.8	0.7	0.7	(0.3)
Total 4 Pepsi Brands	27.5%	28.6%	29.3%	29.3%	1.8%
Regular Seven-Up	6.4%	6.3%	6.2%	5.8%	(0.6)%
Diet Seven-Up	1.7	1.7	1.7	1.9	0.2
Total Seven-Up	8.1%	8.0%	7.9%	7.7%	(0.4)%
Regular Dr Pepper	3.8%	3.8%	3.8%	3.8%	0.0%
Sugar-Free Dr Pepper	1.1	1.2	1.3	1.3	0.2
Total Dr Pepper	4.9%	5.0%	5.1%	5.1%	0.2%
Royal Crown Cola	4.5%	4.2%	4.1%	3.7%	(0.8)%
Diet Rite	1.3	1.2	1.0	0.9	(0.4)
Total 2 RC Brands	5.8%	5.4%	5.1%	4.6%	(1.3)%
All Other Brands	25.5%	25.7%	24.7%	24.3%	(2.2)%
Total All Brands	100.0%	100.0%	100.0%	100.0%	— %

Note: Discrepancies due to rounding.

Source: Bernstein estimates.

Copyright: Beverage Industry
July 24, 1981

Per capita consumption of soft drinks

	Million cases consumed	Gallons per capita
1980	5,900.0	39.6
1979	5,700.0	38.7
1978	5,500.0	37.8
1977	5,280.0	36.5
1976	4,880.0	34.1
1975	4,480.0	31.4
1974	4,480.0	31.7
1973	4,440.0	31.7
1972	4,200.0	30.3
1971	3,950.0	28.8
1970	3,675.0	27.0
1969	3,475.0	25.9
1968	3,300.0	24.9
1967	3,100.0	23.8
1966	2,910.0	22.3
1965	1,925.0	20.4
1964	2,430.0	18.1

Copyright: Beverage Industry and John Maxwell
Sept. 28, 1980

U.S. soft drink plants 1940-1980

State	1940	1950	1960	1965	1970	1972	1973	1974	1975	1976	1977	1978	1980
Alabama	100	139	109	96	73	66	59	59	52	47	45	42	32
Alaska	—	—	12	7	7	7	6	6	5	5	4	4	3
Arizona	30	43	33	32	23	26	23	25	25	23	23	22	24
Arkansas	89	120	76	70	52	49	47	46	40	37	32	33	27
California	243	304	203	183	141	133	132	129	125	117	113	109	94
Colorado	63	76	48	40	34	34	34	36	32	26	26	25	27
Connecticut	118	108	81	63	52	48	47	46	39	37	29	36	30
Delaware	20	18	13	11	10	7	6	6	6	6	5	5	4
Wash. D.C.	19	11	5	3	2	1	1	1	1	1	0	0	1
Florida	140	180	142	123	96	88	84	81	68	62	61	58	54
Georgia	150	199	132	116	98	92	84	82	78	75	71	63	62
Hawaii	—	—	26	25	18	14	15	15	13	10	10	9	9
Idaho	22	30	20	17	17	16	14	14	15	15	15	14	13
Illinois	366	326	192	172	112	98	96	84	80	70	69	65	60
Indiana	154	177	112	98	82	76	76	72	64	57	51	51	46
Iowa	130	136	80	57	42	38	35	29	29	29	28	29	30
Kansas	95	105	62	49	38	34	33	32	30	28	29	29	24
Kentucky	103	126	85	76	62	56	54	53	52	47	45	43	36
Louisiana	85	114	75	68	54	45	46	47	46	42	41	43	38
Maine	62	66	51	43	28	25	23	22	20	19	18	17	13
Maryland	71	80	48	42	36	36	37	38	36	36	35	32	34
Massachusetts	226	222	133	109	85	74	74	73	70	69	63	62	45
Michigan	150	169	110	99	84	80	77	73	67	64	64	56	50
Minnesota	125	134	99	78	60	55	51	52	47	48	49	48	38
Mississippi	101	118	96	85	66	57	55	53	46	42	44	40	37
Missouri	190	190	109	96	77	69	69	65	61	55	51	48	39
Montana	31	37	32	27	25	24	22	21	20	21	19	18	16
Nebraska	78	84	54	44	31	30	28	28	26	25	25	26	25
Nevada	13	16	12	12	11	11	10	10	11	10	10	10	9
New Hampshire	34	35	21	19	15	15	14	12	10	9	11	11	6
New Jersey	225	205	139	106	91	74	73	70	55	52	46	39	33
New Mexico	33	40	31	31	27	26	25	25	22	22	19	22	20
New York	514	433	278	231	171	160	154	153	141	129	116	106	76
North Carolina	171	194	131	119	114	102	101	99	85	82	87	78	70
North Dakota	24	29	18	17	13	12	12	11	11	11	12	9	9
Ohio	248	271	172	140	110	104	101	99	84	82	78	75	62
Oklahoma	106	139	90	75	52	51	49	49	44	44	42	38	32
Oregon	42	68	48	42	35	32	31	31	31	27	27	30	20
Pennsylvania	534	508	357	302	234	213	193	190	171	150	139	130	87
Rhode Island	52	50	33	27	19	17	16	14	14	13	13	11	9
South Carolina	86	116	85	75	63	54	53	50	45	42	43	33	32
South Dakota	29	31	23	18	11	10	10	10	10	10	10	10	7
Tennessee	113	146	100	92	77	73	72	68	62	60	60	55	47
Texas	375	419	283	244	198	178	174	170	163	148	147	136	118
Utah	30	39	29	29	25	25	24	22	21	21	22	20	17
Vermont	20	25	14	13	10	7	7	6	6	6	5	6	6
Virginia	117	136	100	80	65	59	57	53	51	52	49	46	37
Washington	59	85	58	46	35	33	32	31	30	32	34	34	31
West Virginia	88	106	72	62	51	45	43	41	37	36	35	36	25
Wisconsin	224	239	169	147	111	108	104	102	92	86	85	73	61
Wyoming	20	20	18	12	10	10	9	9	9	9	9	7	6
TOTAL	6118	6662	4519	3868	3054	3404	2797	2692	2613	2246	2174	2042	1731

Source: 1940-1978, National Soft Drink Association; 1980, The Beverage Data Bank

21% of soft drink plants control 65% of business

Through the '60s and '70s concentration became a fact of life in the soft drink industry. Today that concentration has reached the point where 21% of the plants control almost 65% of the business.

More specifically, 363 individual plants — all with volumes of over \$10 million each — account for a total of \$10.3 billion in sales and 5.5 billion gallons, approximately 2.4 billion cases (using the NSDA standard 288 oz. case).

Details of the concentration were revealed in the first Census of the Soft Drink Industry compiled by Beverage Marketing Corp. The information was derived from the Beverage Data Bank and was made available exclusively to **Beverage Industry**.

The 180-page report provides a breakdown by size of operations on a national, regional and state-by-state basis. (The charts accompanying this article are a compilation of a portion of the information.)

The first of the BDB reports was on the beer wholesaler industry.

Michael Bellas, BI research director-Beverage Data Bank and president of Beverage Marketing Corp., Mingo Junction, OH, told **Beverage Industry** that this first-ever analysis would be repeated on an

annual basis. He stressed that the information came from private reports and industry data solicited by his firm.

"We feel it is as accurate as it can be made at this time. However, we do anticipate being able to continue to refine our data in the future. Next year's report will also make it possible for us to compare the demographic picture in 1980 vs. 1981," he said.

In addition to the material contained in the report, BMC also is capable of providing information on any portion of the study on a project basis. Janet Fanshaw, BMC vice president, coordinates this program. Individual copies of the Census report are \$845.

the national scene

There are 33 soft drink plants with volumes of over \$50 million. These plants, approximately 2% of the total control well over 15% of dollar and gallonage volume in the industry.

The \$25 million to \$49.9 million group has the largest portion of total sales. The 107 plants in this category represent 6% of the numerical total but have over 25% of dollar and gallonage sales.

By adding the volume and gallonage of the \$10 million to \$24.9 million group to these two higher volume categories, the level of concentration is clear. These 363 plants sell \$10,390,000,000 worth of soft drinks, 65.02% of the total, and 5,467,000,000 gallons, 64.74% of the total.

Numerically the largest group of bottlers is the \$3 million to \$4.9 million sales category. These 359 plants, 20.7% of the total, however, have only 9% of total sales and 8.5% of total gallonage.

In the under \$500,000 sales category, **Beverage Industry** has incorporated BMC's "unclassified" dollar and gallonage volume. The majority of these plants are in the low sales category.

In terms of dollar and gallonage sales, the Southeast ranks first. The 497 bottlers in this 12-state region have 28% of dollar and gallonage sales.

In second place are the bottlers in the Great Lakes area with 16.1% of total dollar sales and 18.9% of gallonage. Although this region is second in sales, it is first in average plant sales volume. The average here is \$10.8 million per plant.

The Mideast is in third place in sales with 13.6% or \$2.3 billion.

1980 national soft drink demographics

Size of plant	No. of plants	% of total	Estimated* dollar volume (1980)	% of total	Estimated* gallonage (1980)	% of total
\$50 million or more	33	1.01	2,475,000	15.40	1,225,000	15.21
\$25 million to \$49.9 million	107	6.10	4,012,500	25.11	2,117,000	25.82
\$10 million to \$24.9 million	225	12.55	3,402,500	21.22	1,697,000	20.77
\$5 million to \$9,999,999	337	19.47	2,557,500	15.92	1,345,000	16.35
\$2 million to \$4,999,999	398	20.74	1,435,000	8.95	716,000	8.83
\$1 million to \$1,999,999	544	19.70	852,500	5.35	411,000	5.04
\$500,000 to \$999,999	225	12.55	440,000	2.76	223,000	2.76
\$100,000 to \$499,999	83	3.45	47,500	.30	25,000	.30
Under \$100,000*	48	2.60	250,000	1.75	132,000	1.61
Total	1,784		16,070,000		8,464,000	

*includes 30 unclassified firms

**Wholesale value

Source: The Beverage Data Bank

Copyright: Beverage Industry

August 7, 1981

1980 state soft drink demographics

State	No. of plants	Estimated dollar volume (add ,000)	Estimated gallonage (add ,000)
Alabama	32	347,000	182,500
Alaska	3	11,500	6,000
Arizona	24	257,000	134,500
Arkansas	27	175,500	93,500
California	94	1,250,664	656,000
Colorado	27	232,750	121,650
Connecticut	30	119,482	64,700
Delaware	4	33,000	17,000
District of Columbia	1	7,500	4,000
Florida	54	624,311	327,900
Georgia	62	500,203	267,000
Hawaii	9	73,500	38,000
Idaho	13	38,500	20,500
Illinois	60	692,499	358,700
Indiana	46	475,000	250,550
Iowa	30	147,500	78,300
Kansas	24	215,500	114,000
Kentucky	36	333,500	176,000
Louisiana	38	539,000	284,000
Maine	13	70,687	38,900
Maryland	34	496,187	257,000
Massachusetts	45	326,000	170,750
Michigan	50	551,785	292,000
Minnesota	38	437,256	232,900
Mississippi	37	205,000	108,000
Missouri	39	345,250	183,450
Montana	16	43,250	23,900
Nebraska	25	168,500	88,800
Nevada	9	35,750	18,400
New Hampshire	6	35,750	18,400
New Jersey	33	341,859	179,350
New Mexico	20	94,473	52,900
New York	76	784,826	414,400
North Carolina	70	455,750	240,900
North Dakota	9	33,000	17,500
Ohio	62	972,434	511,700
Oklahoma	32	336,000	179,000
Oregon	20	134,500	71,500
Pennsylvania	87	684,741	362,800
Rhode Island	9	19,500	10,850
South Carolina	32	350,000	185,500
South Dakota	7	26,500	14,000
Tennessee	47	506,500	268,000
Texas	118	1,170,500	620,500
Utah	17	127,500	67,000
Vermont	6	20,000	10,000
Virginia	37	364,861	192,500
Washington	31	273,750	143,900
West Virginia	25	132,000	68,500
Wisconsin	61	313,150	171,350
Wyoming	6	66,500	35,500
Totals	1731	15,997,668*	8,444,950

*dollar totals have been rounded

Source: The Beverage Data Bank

Copyright: Beverage Industry
August 7, 1981

1980 regional soft drink demographics

Region	no. of plants	% of total	estimated dollar volume (add, 000)	% of total	estimated gallonage (add, 000)	% of total
New England	109	6.3	592,878	3.7	313,600	3.7
Mideast	235	13.6	2,342,303	14.7	1,234,550	14.6
Great Lakes	279	16.1	3,012,263	18.9	1,584,300	18.8
Plains	172	9.9	1,369,964	8.6	728,950	8.6
Southeast	497	28.7	4,536,263	28.4	2,394,300	28.4
Southwest	194	11.2	1,862,852	11.7	986,900	11.7
Rocky Mountain	79	0.4	508,500	0.3	268,550	3.2
Far West	166	9.6	1,771,769	11.1	933,800	11.1
Totals	1,731		15,996,792		8,444,950	

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The Sunbelt states of the Southwest account for 11.2% of total sales. The average per-plant here is \$9.6 million.

The Plains states with 9.9% of sales, \$1.3 billion, are in fifth place. Although the Far West region is in sixth place in total sales, 9.6% or \$1.7 billion, the 166 plants in this area average \$10.6 million each and are in second place in this category.

New England with \$592 million in sales and the Rocky Mountain region with \$508 million are in seventh and eighth place, respectively.

The Sunbelt states of Texas and California lead all others in sales. The 94 bottlers in California are in first place with \$1.2 billion in sales. Texas is second with \$1.1 billion.

Lowest volume state is Alaska. Here the three bottlers share \$11.5 million in sales.

In addition to California and Texas, others in the top ten are: Ohio, \$972.4 million; New York, \$784.8 million; Illinois, \$692.5 million; Pennsylvania, \$684.7 million; Florida, \$624.3 million; Michigan, \$551.7 million; Louisiana, \$539.0 million and Tennessee \$506.5 million.

Because many major bottlers have franchises covering several states, the production figures do not indicate actual consumption in the state. (For example, New York Coke fills its PET containers — for its entire New York, New Jersey, Connecticut markets — in Elmhurst, New York.)

For information on the Soft Drink Plant Census, contact Janet Fanshaw, Beverage Marketing Corp., 866 Second Ave., New York, NY 10017. Telephone: 212-688-7640. Single copies are \$845.

Circle no. 86 on reader's service card

Soft drink, beer prices by market

Major market areas	Cans, price per physical case (24 oz.)	16-oz. refillables, price per physical case (24 oz.)	All refillables, price per equivalent case (192 oz.)
USA	\$6.66	\$5.46	\$2.71
Portland	7.16*	6.74	3.27
Detroit	7.16*	6.26	3.12
All Other New York & New England, including Maine & Vermont	6.21*	6.58	3.17
Boston	6.51	**	2.17
New York	6.69	**	2.22
Philadelphia	6.23	5.10	2.54
Rochester	6.02	4.74	2.39
Washington/Baltimore	6.39	5.42	2.89
Cincinnati	6.81	5.20	2.64
Cleveland	6.96	5.58	2.79
Pittsburgh	6.90	5.50	2.70
Chicago	7.19	5.32	2.61
Indianapolis	6.51	4.94	2.52
Kansas City	6.93	5.44	2.78
Minneapolis/St. Paul	6.26	4.88	2.42
Seattle/Tacoma	6.63	**	2.44
San Francisco	6.60	5.60	2.61
Los Angeles	6.60	6.08	2.92
Atlanta	6.48	4.72	2.50
Miami	6.89	6.30	2.91
St. Louis	6.03	5.92	2.96
Dallas	7.04	6.06	2.74
Houston	6.81	6.44	2.47
Denver	5.91	4.92	2.26
All other Mid-Atlantic	6.23	5.34	2.90
All other East	6.21	5.78	3.04
All other Mid-East	7.13	5.46	2.75
All other Mid-Central	6.41	4.80	2.47
All other remaining Mid-Central	6.44	4.76	2.44
All other Central	6.42	4.80	2.45
All other West	6.74	5.62	2.89
All other Georgia/Florida	6.39	6.06	3.03
All other Carolina	6.47	5.28	2.71
All other Southeast	6.44	5.78	2.87
All other Arkansas/Louisiana	6.66	5.34	2.77
All other Dixie	6.87	5.02	2.57
All other Mid-South	6.78	5.06	2.64
All other Southwest	7.08	5.80	2.70

*This price does not include the refund value

**Less than 1% of market

Source: NSDA

Copyright: Beverage Industry
December 26, 1980

Beer up 2.6% to record 175.1 million barrels in '80

TOP TEN BEER BRANDS			
RANK	'80 MARKET SHARE	BRAND	'80 PRODUCTION*
1	13.4%	BUDWEISER	17.2
2	12.4%	MILLER HIGH LIFE	16.7
3	7.5%	MILLER LITE	13.2
4	6.5%	COORS	11.4
5	4.4%	PABST BLUE RIBBON	10.5
6	3.8%	MICHELOB	9.5
7	3.3%	SCHLITZ	7.5
8	2.3%	OLD MILWAUKEE	4.4
9	1.6%	BUSCH	2.8
10	1.5%	MICHELOB LIGHT	2.6

Copyright: Beverage Industry
February 13, 1981

Domestic beer production, generally a good measure of sales performance, rose by 2.6% last year for a record total of 175.1 million barrels, says John C. Maxwell, **Beverage Industry's** director of research/statistics.

However, the numbers supplied in Maxwell's latest annual survey of the beer industry show that despite the all-time sales high registered in 1980, the 2.6% growth rate for the year is significantly lower than the figures for 1977 (+4.5%), 1978

(+3.6%), and 1979 (+3.6%).

In each of these years (and virtually all of the '70s) the growth experienced by the brewing industry as a whole during 1980 was largely attributable to the performance of the nation's top six brewers: Anheuser-Busch, Miller, Pabst (which took over the number three spot last year), Schlitz, Coors and Heileman. Together, they accounted for 83% of all beer produced in the United States last year.

When considered as a unit, those

six had an increase in production of 9.7 million barrels in 1980, compared to a net gain of 4.1 million for the entire industry. Along the same lines, the top six collectively registered a 5.2% increase in sales, while the rest of the nation's brewers experienced a 8.6% decrease.

The performance of Anheuser-Busch was especially strong. Overall, the nation's largest brewing company boosted its production by 8.9% to 50.3 million barrels, giving it a 28.7% share of the total market

compared to its 27.6% portion in 1979.

"With a gain projected at almost 4 million barrels," says Maxwell, "Anheuser-Busch should show the best absolute growth within the industry."

Bud is still 'King'

Maxwell adds that, with a 13% increase in production, "Budweiser has been the only major product showing meaningful growth in 1980." The "King of Beers" tightened its grasp on the crown with a 3.9 million barrel sales increase, raising its share of the beer market to 19.4%, or roughly one out of every five beers sold.

Significant gains were also regis-

tered by Michelob Light, with production rising 30% to 2.6 million barrels. Production of regular Michelob was also stepped up, with a 500,000 (+6.3%) increase.

The only disappointment in the A-B portfolio," Maxwell points out, "was its Natural Light. After a 57.9% increase during the previous three years, production of the low calorie brew fell 16.7% in 1980.

The situation was exactly reversed with the Miller Brewing Co. Overall, the brewing company's production rose by 2.5 million barrels last year; 2 million barrels of the increase came from a step up in the sales of Miller Lite.

The 17.9% increase in production of the light segment leader

gave it a 1980 total of 13.2 million barrels, or 7.5% of the total beer market. Lite was outsold only by Budweiser and Miller High Life.

Surprisingly, following a 26% increase in '78 and a 13.5% jump in '79, production of High Life rose by only .8% last year. Nevertheless, with a production figure of 23.8 million barrels, Miller's flagship brand retained a 13.6% share of market, prompting Maxwell to comment that the brand is still a strong contender.

"Beer is like any consumer product," he says. "Sales grow, form a base; grow, form a base. High Life sales have grown, and now they've formed a base. They'll likely grow again.

"I'm not saying they'll go back

Anheuser-Busch	26.6	29.9	34.1	35.2	29.1	36.6	41.6	46.2	50.3	8.9%	53.5(k)
Miller	5.4(d)	6.9	9.1	12.9	18.4	24.2	31.3	35.8	38.3(l)	7.0	45.0
Pabst	12.5	13.1	14.3	15.7	17.0	18.0	15.4	15.1(j)	15.0	(.6)	17.5
Schlitz	18.9	21.3	22.7	23.3	24.2	22.1	19.6	16.8	14.7	(12.5)	25.0(k)
Coors	9.8	10.9	12.3	11.9	13.5	12.8	12.6	12.9	13.7	6.2	15.0
Heileman(a)	9.9	10.5	9.5	10.0	9.6	10.8	10.5	11.3	13.3	17.7	14.5
Stroh	4.2	4.6	4.4(g)	5.1	5.7	6.1	6.3	6.1	6.2	1.6	7.3
Olympia(b)	4.4	4.7	5.3	6.6	7.3	6.8	6.7	6.1	6.1	0	9.0
Schaefer(c)	5.5	5.6	5.7	5.9	5.2	4.7	3.9	3.5	3.6	2.9	5.0
Genesee	1.7	1.9	2.1	2.4	2.5	2.8	3.0	3.4	3.6	5.9	4.0
Schmidt	3.2	3.5	3.5	3.3	3.5	3.5(h)	3.8	3.8	3.5	(7.9)	4.3
General	6.2(e)	6.0	5.8	6.1	4.2	4.0	3.5(i)	3.0	2.6	(13.3)	8.8
Pittsburgh	0.9(f)	0.9	1.0	1.0	0.9	0.7	0.6	0.7	1.0	42.9	1.5
All Others	24.2	20.5	17.6	10.9	11.2	8.2	6.0	6.0	3.2	(46.7)	3.5
Total	133.4	140.3	147.4	150.3	152.3	159.1	164.8	170.7	175.1	2.6	213.9
Less tax-free exports and military	1.6	1.8	1.9	1.7	1.9	2.2	2.6	2.6	2.6	0	
Total	131.8	138.5	145.5	148.6	150.4	156.9	162.2	168.1	172.5	2.6	
Imports	0.9	1.1	1.4	1.7	2.4	2.5	3.5	4.4	4.6	4.5	
Total U.S. Consumption	132.7	139.6	146.9	150.3	152.8	159.4	165.7	172.5	177.1	2.7	

to increasing 30% a year like they did in the early '70's," he continues. "But they're going to go back up to 7-10%."

The drop in High Life sales was offset somewhat by the gains made by Lowenbrau. Production of the superpremium jumped 30% to 1.2 million barrels. Yet it still holds only a .7% share of the market, compared to Michelob's 4.9% por-



Production by brand				
	1979	1980	1981	Change 1981-1980
Anheuser-Busch				
Budweiser	27.0	30.0	33.9	13.0%
Michelob	7.5	8.0	8.5	6.3
Busch	3.6	3.2	2.8	(12.5)
Michelob Light	1.0	2.0	2.6	30.0
Natural Light	2.5	3.0	2.5	(16.7)
Total	41.6	46.2	50.3	8.9
Miller				
High Life	20.8	23.6	23.8	.8
Lite	9.5	11.2	13.2	17.9
Lowenbrau	1.0	0.9	1.2	33.3
Other	—	0.1	0.1	0
Total	31.3	35.8	38.3	7.0
Pabst				
Pabst	12.7	12.3	11.2	(8.9)
Olde English (Malt)	0.5	0.7	1.0	42.9
Red, White & Blue	0.5	0.9	1.2	33.3
Blitz	0.3	0.5	0.8	60.0
Pabst Light	0.6	0.7	0.6	(14.3)
Other	0.8	—	0.2	—
Total	15.4	15.1	15.0	.7
Schlitz				
Schlitz	13.0	10.5	7.5	(28.6)
Old Milwaukee	3.6	3.7	4.0	8.1
Schlitz Malt	1.8	1.9	2.2	15.8
Schlitz Light	0.8	0.6	0.4	(33.3)
Erlanger	—	—	0.4	—
Other	0.4	0.1	0.2	100
Total	19.6	16.8	14.7	(12.5)
Coors				
Coors	12.1	11.3	11.4	.9
Coors Light	0.5	1.6	2.3	43.8
Total	12.6	12.9	13.7	6.2

tion.

Although Miller turned in a 7% increase in the overall production of its brands, it failed to keep pace with arch-rival A-B. The St. Louis-based industry leader increased its share of the market by 1.6 points to 28.7%, while Miller raised its portion only .9 to 21.9%.

Pabst: new #3

"The big news this year," says Maxwell, "has been Pabst's move into third place, passing Schlitz." Yet Pabst won the title by default rather than through aggressiveness. Its production actually dropped from 15.1 million to 15 million barrels — a fall of .7%, but nothing compared to the precipitous 12.5% decline experienced by Schlitz.

The big factor in Pabst's decline was a 8.9% drop in the production of its flagship brand. With a 1980 total of 11.2 million barrels, Pabst Blue Ribbon fell from its position as the third best selling brand in America to the number five slot, behind Budweiser, Miller High Life, Miller Lite and Coors.

However, that drop was countered by increases in production of what have become three of the fastest selling brands in the country: Olde English, Red, White & Blue, and Blitz. Although their individual market shares still fall below 1%, sales of those brands jumped 42.9%, 33.3% and 60%, respectively.

The increase for Olde English, a brew popular among young adults,

college students and blacks, makes it "even with Heileman's Colt 45" in the malt liquor segment," Maxwell says. He adds that Olde English's strong performance last year was one factor in the general rise in malt liquor consumption. This "often overlooked category," he says, "is putting in some good gains. The area is currently led by Schlitz, and Pabst's Olde English brand is moving ahead rapidly."

Schlitz

Schlitz Malt was one of the few good performers in the Jos. Schlitz Brewing Co.'s stable of brands. With 2.2 million barrels sold during 1980, production of the malt liquor was up 13.2% during 1980, more than double the 5.9% and 5.6% increases for '78 and '79 respectively.

Also on the rise was the production of Old Milwaukee, which jumped 4 million barrels last year

for a 2.3% share of the total market.

On the negative side, sales of Schlitz's flagship brand were off by 28.6% last year, yielding a production figure of 7.5 million barrels. Once one of the nation's top selling beers, Schlitz now holds only 4.3% of the market.

The same has happened with Schlitz Light. When the light segment first exploded, Schlitz's entrant was a top contender. Yet only 400,000 barrels of the brew were sold in 1980, a 33% decline from the previous year and a 50% drop from '78.

Coors on the rise

Gaining fast on the Jos. Schlitz Brewing Co. is the Adolph Coors Co., which boosted its production from 12.9 million barrels to 13.7 million last year to close the gap between it and Schlitz to 1 million

Year-end rated capacity of leading brewers

(million barrels)

	1978	1979	1980E	1981P	1982P
Anheuser-Busch	44.0	47.0	53.5	61.0	70.0
Miller*	34.0	38.0	45.0	52.0	59.0
Schlitz	30.0	30.0	25.0†	25.0	25.0
Pabst	17.5	17.5	17.5	17.5	17.5
Coors	16.0	15.0	15.0	15.0	15.0
Total	141.5	147.5	156.0	170.5	186.5

†Pro forma for sale of Schlitz Syracuse Brewery

*Full-out annual capacity — 24 hours a day, seven days a week.
It is necessary to deduct about 15% for comparability.

Copyright: Beverage Industry and John C. Maxwell
February 13, 1981

Top ten domestic beer brands

Pos. '80	Pos. '79	Brand	'80 production*	change, '79-'80	'80 market share
1	1	Budweiser	33.9	13%	19.4%
2	2	Miller High Life	23.8	.8	13.6
3	5	Miller Lite	13.2	17.9	7.5
4	4	Coors	11.4	.9	6.5
5	3	Pabst Blue Ribbon	11.2	(8.9)	6.4
6	7	Michelob	8.5	6.3	4.9
7	6	Schlitz	7.5	(28.6)	4.3
8	8	Old Milwaukee	4.0	8.1	2.3
9	9	Busch	2.8	(12.5)	1.6
10	11	Michelob Light	2.6	30	1.5

*mil. barrels

Copyright: Beverage Industry
February 13, 1981

Schlitz (Schlitz)	900	1,100	1,300	1,500	1,700	1,800	1,900	2,150	13.2%
Olde English (Pabst)	—	—	—	—	—	500	900	1,200	33.3
Colt 45 (Heileman)	1,100	1,200	1,300	1,400	1,400	1,350	1,000	1,200	20
Champale (Iroquois)	385	350	400	400	700	800	900	900	0
Country Club (Pearl)	710	600	550	500	450	400	300	200	(33)
Malt Duck (Heileman)	—	50	80	100	110	125	100	100	0
Miller (Philip Morris)	—	80	•						
Bud Malt (Anheuser-Busch)	80	•							
Subtotal	3,090	3,380	3,630	4,000	4,360	4,975	5,100	5,750	12.7
All Others	110	120	120	170	200	50	50	50	0
Total	3,285	3,500	3,750	4,170	4,560	5,025	5,150	5,800	12.6

barrels. Leading the way was the Colorado-based brewery's flagship brand, which kept its position as the nation's fourth best-selling domestic brand with a .9% increase in sales. Maxwell cites a production figure of 11.4 million barrels.

Coors Light also continued to fare well. A 43% increase in sales brought production to 2.3 million barrels, only 200,000 short of Natural Light and 500,000 below Michelob Light.

Coors is still a member of the top five, but close behind is the G. Heileman Brewing Co., with a 1980 production total just 400,000 gallons shy of Coors' figure. Sales of its extensive line of products leaped from 11.3 million to 13.3 million barrels, giving it the fastest growth rate (17.7%) of any major U.S. brewer. The dollar figures are even more impressive: according to Heileman President Russel G. Cleary, sales jumped from \$482.7

million in '79 to \$644.4 last year, an increase of 33.5%.

Only 10 years ago, with an annual production of 3 million barrels, Heileman's wasn't even listed among the nation's top 10 brewers.

A close race is also heating up between Stroh and Olympia. In 1979, the two regional brewers were tied for the number seven position with production totals of 6.1 million barrels. Last year, Stroh's nosed ahead with a 100,000 (1.6%) increase. Olympia's production stayed at 6.1 million. Stroh will increase its lead — and perhaps even give Heileman a run for its money — if it finalizes its deal to acquire Schaefer, which had a production figure of 3.5 million barrels last year.

Other breweries that fared well in 1980 include Genesee, which increased its production by 5.9% to tie with Schaefer for the number nine position despite a 2.9% in-

crease in sales for the latter company; and Pittsburgh, a regional brewery that maintained its hold on the number 13 position with a 42.9% rise in production. Its 1980 total was 1 million barrels.

On the negative side, Christian Schmidt Brewing Co.'s production fell 7.9%, and General Brewing Co. saw its sales drop 12.3%. The "all other" category, which includes breweries with a production total of less than 1 million barrels, experienced a 46.7% decline.

According to Maxwell, imports continued to penetrate the American market, with 4.6 million barrels consumed in the United States last year compared to 4.4 million in '79. However, the pace has slowed significantly. In 1978, sales of imports rose by 40%, and a year later a 25.7% increase showed that the foreign brands were still performing well. In '80 the increase was 3.8%.

16% of beer distributors control 55% of total sales

National beer distributor demographics

Annual sales	No. of companies/ estimated companies	% of total	Wholesale* dollar volume (est. \$ mil.)	% of total	Estimated barrelage (est. 000)	% of total
\$50 mil or more	8	0.17	480,000	2.77	5,000	2.81
\$25 mil to \$49.9 mil	28	0.59	1,050,000	6.07	11,200	6.30
\$10 mil to \$24.9 mil	258	5.47	4,515,000	26.09	48,440	26.11
\$5 mil to \$9.9 mil	466	9.89	3,495,000	20.20	37,280	20.96
\$3 mil to \$4.9 mil	661	14.45	2,724,000	15.74	27,240	15.32
\$2 mil to \$2.9 mil	1,112	23.59	2,780,000	16.07	27,800	15.63
\$1 mil to \$1.9 mil	1,035	21.98	1,552,500	8.97	15,525	8.73
\$500,000 to \$999,999	829	17.59	621,750	3.59	6,632	3.73
Under \$500,000*	297	6.30	84,250	0.49	712	.40
Total	4,714		\$17,302,500		177,829	

*Excludes beer distributors.

Source: Beverage Data Bank.

Copyright: Beverage Industry

July 29, 1981

A total of 760 beer distributors — all with sales of over \$5 million — control more than half of total sales in the industry.

The figures are revealed in a new study, released exclusively to **Beverage Industry**, by the Beverage Data Bank and published by Beverage Marketing Corp., located in New York City.

The study documents, for the first time, the concentration of business among the larger volume distributorships. The report details demographic data on a national, regional and state basis.

According to the Beverage Data Bank material, there are eight distributors in the United States with sales of \$50 million or more. (Because this is a first-time-ever research project, no comparative data for earlier years is available.)

These eight companies, along with 752 others in the \$5-million-or-more sales category, have a total dollar volume of \$9.5 billion and have cumulative barrelage of 99.9 million barrels.

Michael Bellas, BI research director and president of Beverage Marketing Corp., says the material was

collected from individual distributors as part of his firm's annual updating of its census of the beverage industry.

"In virtually every case, we have verified the information utilizing state and national withdrawal information," he said.

Bellas intends to offer the complete study — price \$845 each — on an annual basis. In addition, his firm has also compiled similar data on the soft drink industry.

Janet Fanshawe, BMC sales manager, is co-ordinating the project. "In addition to the complete study," she commented, "we can provide additional data about each of the companies. We can locate them, provide key contracts and supply valuable information on a contracted basis."

regional data

This picture of domination by the larger firms nationally is also repeated in the regional material. In New England, the over-\$5 million plants, 38.4% of the total, control 72.9% of total dollar volume in the region and 73.9% of total barre-

lage.

In the Mideast (for breakdown of which states are included in each region, see below), the 140 firms in the over-\$5 million size, 17.6% of the total, have 63.3% of total sales and 64.2% of total barrelage. This area, with three, contains more \$50-million and-over distributorships than any other. In the Great Lakes region, which has more distributors than any other, the \$5 million-and-over group, 15.6% of the total, has 52% of total dollar sales, 53% of total barrelage.

In the Plains states, the business is more evenly divided — 229 distributors, or 41.9% of the 546 in that region, have 75% of total sales and barrelage. These firms all have dollar volumes of over \$2 million.

The Southeast almost duplicates the national picture. Here 17% of the distributors — all in the over \$5 million size — have 52% of total dollar volume and 53% of total barrelage.

Fifteen percent of the distributors in the Southwest — 81 plants all with volumes of over \$5 million — have 5% of total dollar volume and 54% of barrelage.

State beer distributor demographics

State	no. of companies/ establishments	wholesaler dollar volume (estd. 1980)	estimated barrelage (estd. 1980)
Alabama	59	207,750	2,119
Alaska	16	35,000	344
Arizona	63	257,000	2,632
Arkansas	59	128,500	1,301
California	293	1,897,750	19,564
Colorado	60	248,500	2,560
Connecticut	23	182,500	1,915
Delaware	9	48,500	495
Washington, DC	5	50,500	520
Florida	97	885,500	9,244
Georgia	72	333,000	3,433
Hawaii	23	77,750	805
Idaho	43	75,250	758
Illinois	244	892,500	9,206
Indiana	165	376,500	3,836
Iowa	107	229,750	2,332
Kansas	66	161,250	1,652
Kentucky	73	212,250	2,195
Louisiana	77	307,250	3,162
Maine	29	86,000	870
Maryland	69	333,000	3,419
Massachusetts	54	481,750	4,966
Michigan	204	681,250	6,965
Minnesota	147	314,500	3,184
Mississippi	61	151,250	1,540
Missouri	111	375,750	3,874
Montana	50	83,500	840
Nebraska	48	134,000	1,379
Nevada	22	92,250	957
New Hampshire	20	98,000	1,015
New Jersey	58	506,250	5,228
New Mexico	31	112,750	1,148
New York	183	1,215,500	12,583
North Carolina	96	359,000	3,687
North Dakota	36	55,250	557
Ohio	166	821,250	8,495
Oklahoma	65	188,750	1,938
Oregon	112	204,000	2,059
Pennsylvania	471	970,250	9,890
Rhode Island	11	77,000	805
South Carolina	59	208,250	2,118
South Dakota	31	50,250	504
Tennessee	63	280,250	2,864
Texas	374	1,339,750	13,833
Utah	22	68,750	709
Vermont	14	45,000	455
Virginia	102	370,250	3,774
Washington	141	333,500	3,371
West Virginia	75	109,000	1,104
Wisconsin	198	501,500	5,119
Wyoming	37	47,750	486

Region	No. of Firms	% of Total Firms	Total Sales (\$ mil.)	% of Total Sales	Total Barrelage (bil. gal.)	% of Total Barrelage
New England	151	3.2	970,250	5.6	10,046	5.6
Midwest	795	16.8	3,124,000	18.0	32,137	18.0
Great Lakes	577	20.7	3,273,000	18.9	33,622	18.9
Plains	546	11.6	1,320,750	18.6	13,484	7.5
Southeast	893	18.9	3,552,250	20.5	36,543	20.5
Southwest	533	11.3	1,898,250	11.0	19,552	10.9
Rocky Mountain	212	4.0	523,750	3.0	5,353	3.6
Far West	607	12.8	2,640,250	15.2	27,092	15.2

Regional breakdown

New England: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.

Midwest: Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania.

Great Lakes: Illinois, Indiana, Michigan, Ohio, Wisconsin.

Plains: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.

Southeast: Alabama, Arkansas,

Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia.

Southwest: Arizona, New Mexico, Oklahoma, Texas.

Rocky Mountain: Colorado, Idaho, Montana, Utah, Wyoming.

Far West: Alaska, California, Hawaii, Nevada, Oregon, Washington.

Business is also more evenly distributed in the Rocky Mountain region. Here 38% of the companies — 81 — have 71.7% of dollar volume and just about the same percent of barrelage.

In the Far West, the over \$5 million size operations — 124 firms, 20.4% of the total — also dominate. They have 53% of dollar volume and 64% of total barrelage.

The BDB report also contains a complete breakdown for each state. It covers number of operations by

size and gives their barrelage and dollar volumes.

state picture

Although concentration of sales nationally clearly shows the dominance of the major distributors, the state picture is more balanced.

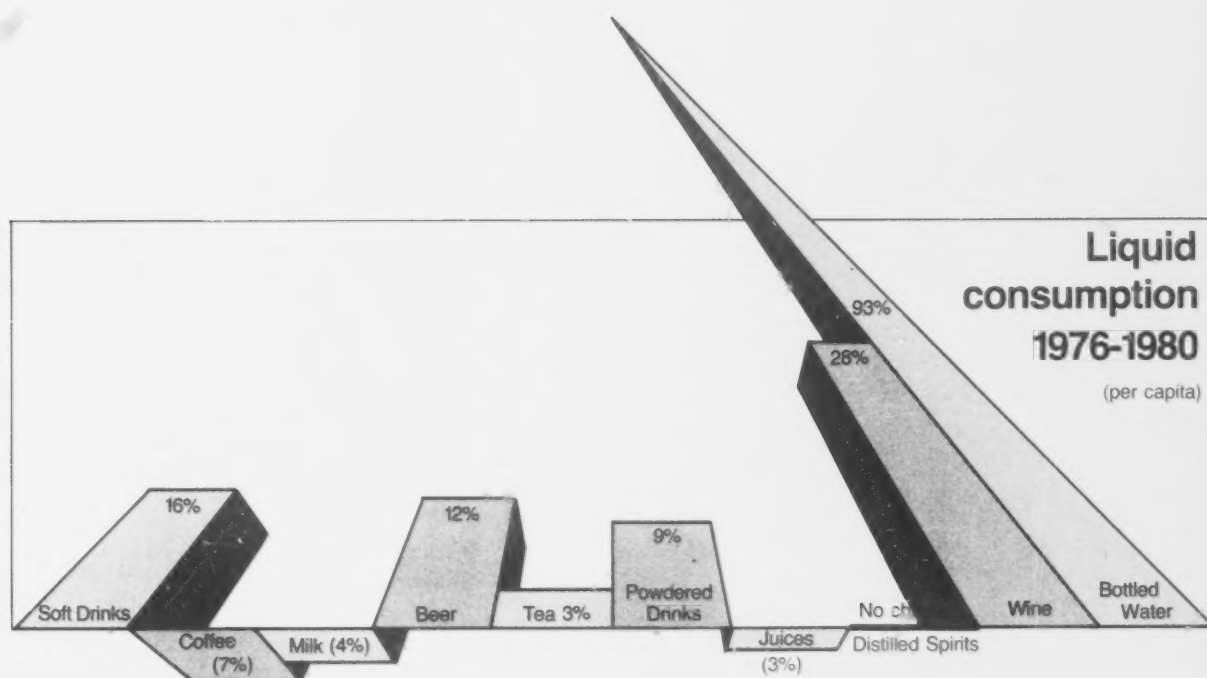
In Oregon, for example, 80% of the beer distributing companies are in the \$1 million to \$10 million category. They divide a total of almost 93% of the total beer business in

that state.

Operations in Florida, however, present a totally different picture. Here nearly one-fourth of all the distributors are in the \$10-million-or-more sales category. These operations have clear dominance in the state with 61% of all volume.

To obtain a copy of the complete 180-page report, contact Beverage Marketing Corp., 2670 Commercial Ave., Mingo Junction, OH 43938, phone 614-598-4133 or phone, in New York, 212-688-7640.

Bottled water industry sees market growth



The bottled water industry, riding the tide of social and environmental transformations, has risen its head far above the stagnant shallows of the early 1970s to become the fastest growing facet of the beverage industry.

With problem municipal water supplies and a heightening of consumer's awareness for health, the bottled water industry has experienced radical change in the past few years. Dollar sales for 1980 are estimated to be \$443 million (producer's price), with an expected growth of 20% (13% of that being real growth and 7% price increases) annually through 1985.

Accelerating these changes was the revolutionary marketing ap-

proaches introduced in the late 1970s by Perrier. Utilizing a large advertising budget, Perrier was able to awaken consumer awareness to mineral water and bottled water, in general. No longer thought of as a substitute for tap water, bottled water has become a social and health drink.

Business Trends Analysts, Inc., (BTA) said in its recent report, "The U.S. Bottle Water Market: Feast or Famine in the 1980s," that although bottled water may now be considered a luxury, it soon may become a necessity. Given this frame of reference, and the fact that the potential demand for bottled water has barely been tapped, the future for this industry is bright

indeed.

Dennis Macchio, project coordinator for BTA said, "The bottled water industry has undergone revolutionary growth over the past four or five years. Carbonated mineral water has seen the most dynamic growth. However, purified water and plain spring water are also enjoying residual growth." Though Macchio acknowledges the phenomenal growth of the carbonated mineral water — water that competes in the soft drink market — he predicts this segment of the industry to flatten out over the next two to three years. Macchio reasons that the health conscious consumers will remain in the market but that trendiness has begun to fade.

Bottled water distribution channels

(\$ Million)

	Sales through retail outlets*	% of total	Home delivery	% of total	Commercial delivery	% of total
1976	\$ 22.6	12%	\$131.6	70%	\$33.8	18%
1977	28.8	14	144.2	70	33.0	16
1978	42.7	17	170.7	68	37.6	15
1979	71.2	20	238.5	67	46.3	13
1980E	110.7	25	288.0	65	44.3	10
1985P	346.9	32	650.4	60	86.7	8

*At Cost

E-Estimate

P-Projection

Source: Business Trend Analysts, Inc.

Copyright: Beverage Industry
September 18, 1981

Purified and processed water may be the fastest growing sector of the bottled water market between 1980 and 1985. BTA estimates the annual growth for purified water during this period at 20.1%. Following closely behind, sales of mineral water are expected to grow 18% during the same time span, with domestic water as the fastest growing segment, increasing in dollar volume 24% annually for the next five years. Imported mineral water will not grow as fast as domestic but will still an increase in dollar volume 16% between 1980 and 1985.

By 1985, BTA estimates mineral water will possess 30% of the entire bottled water market, with imported mineral water accounting for 20% of the same market. Fran Mullin, vice president of marketing for Canada Dry observed that "pricing has hurt the imports; we have seen a definite softening of their business."

Ron Davis, president of Perrier, takes issue with the predictions of a slowing in the imported water sector. Davis stated, "We are now established as to keep our prices stable. We are higher than the domestics, but not significantly so — about the same relationship you have in the beer market. Exchange rates are also helping at the present time, two years ago the dollar was pretty soft, but today its not bad." Davis feels that within the premium segment, Perrier will continue to

grow and dominate the market.

The growth in gallonage has reflected the growth in dollar volume. Between 1971 and 1975, gallonage of bottled water was growing about 1% each year. With a growth rate of 13% annually at the present time, the number of gallons of bottled water consumed will double between now and 1985. George Schmitt, president of Hinckley and Schmitt, said, "The market is going to continue to grow at least as fast as it has in the last two years, perhaps even faster. If you look at the different parts of the industry, the small package business, which is the retail supermarket, is growing faster than the office or home delivery." It seems that distribution outlets, such as home delivery, commercial delivery, supermarkets, bars and restaurants offer vast opportunities for existing and new bottled water companies.

Totalling only 5% of bottled water sales a few years ago, supermarkets will probably account for 20% of sales in 1980. The growing demand for bottled water indicates that the growth in supermarket distribution has a bright horizon. By 1985, it is expected that 25% of all bottled water sales will be in supermarkets.

Davis of Perrier sees a continued growth, for the present, in home and commercial delivery because of the concern for the quality of water. Yet, he believes that it is the retail outlet that will show the most

dynamic growth in the coming years. "Home delivery will decline in much the same way the milk business did with the increasing number of working deliveries. Also, you are only able to drop one or two bottles as opposed to the massive amounts that can be distributed through retail outlets," said Davis.

Playing an important role in gaining new converts to bottled water, bars and restaurants have contributed greatly to the growth of retail bottled water sales. With the trend towards lighter drinking habits, this type of retail rate of growth as a retail distribution outlet has already leveled off.

Macchio from BTA noted that most of the major bottled water producers have begun to gear their package design for the supermarket. Perrier, bottled in 6½, 11 and 23 oz. size glass bottles, has designed their product to flow into this particular channel of distribution. Approximately 70% of the 6½ oz. size bottles are believed to be sold in restaurants and bars where Perrier has the biggest edge over the competition, while 85% of their larger sizes are thought to be sold by supermarkets and other retail outlets.

Perrier recently introduced an 11 oz. four-pack with Cluster Wrap and Alcoa closures on its 23 oz. bottles. Tests held in Miami saw sales increase by 23% because of the easy-open and reseal features of

the closure.

William White, president of Saratoga Springs Co., said, "The home market is nominal for sparkling water and will continue to remain in much the same manner. The principal potential outlet for growth is the supermarket channel, although there has clearly been established an important premium priced market-place in the on-premise trade."

Far behind Perrier in the retail market are Arrowhead Puritas, Sparklets, Hinckley-Schmitt and Deer Park. Each of these companies is estimated to have between 3% and 6% of the retail market. The rest of this market is divided among numerous regional brands and half a dozen imported waters. Though lagging in the retail end of distribution, these firms are estimated to possess almost 80% of the bottled water sold through home and office delivery in this country.

Realizing this industry to be more than a drop in a bucket, large corporations may begin to enter it in increasing numbers in the coming years. With more companies in the industry comes competition, which brings on a thinning of the ranks as marginally profitable firms either go out of business or else are acquired by larger firms.

Hickley and Schmitt has recently acquired Wometco's Aqua Royal bottled water division, making the firm the largest bottler of water in Florida and the second largest independently operated bottled water company in the nation. "I see many smaller firms being absorbed

in the industry," said Schmitt. "I feel that this is more a product of the cost of money than competition. With interest rates being the way they have been for the last two years, smaller firms do not have the ability to raise the necessary capital needed for growth.

Small firm survival

Perrier's Davis agrees with Schmitt in that larger corporations have the resources needed for market expansion but adds that this industry "will go the way of the soft drink business with many small entrepreneurial firms that have hung on in many markets." Mullin of Canada Dry also feels the smaller firms can exist in the shadow of larger companies if they do not depend on their growth from the retail end but look to the home and commercial deliveries. In the short run, three to five years, there is enough action for all interested parties, but now is the time for smaller firms to solidify and increase their share in the marketplace.

William Kell, president of Arrowhead Puritas Waters, optimistically stated, "I feel there will always be a place for the small guy, even amidst acquisitions and big advertising budgets."

With consumer demand and advertising expenditures increasing, and competition heating up, it seems the bottled water industry is heading towards market maturity in the near future. Will there ever come a time when bottled water will be able to outsell Coke by an

Imported Bottled Water - First Quarter 1980

Brand	Price per gallon
Fluget	4.30
San Pellegrino	3.72
Apollinare	3.71
Badoli	3.83
Contaxville	3.63
Peter Val	3.43
Evian	3.30
Montclair	3.11
Vichy-Celestine	3.03
Perrier	3.00
White Rock	2.87
Saratoga	2.71
Ferrarello	2.63
Canada Dry	2.46
Poland Spring	2.34
Mountain Valley	2.16
Deer Park 100%	2.11
Deer Park Spring	0.77
Great Bear	0.69
Hickley-Schmitt	0.54
U.S. 5 Gal Jug	0.43

Source: Beverage Industry, Inc.
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Beverage Industry, Inc., 1982

estimated 2 to 1 ratio as in Europe? John B. Onthank, president of Schweppes U.S.A., Ltd., felt "There will be a greater U.S. market penetration, but it will take a long time. I think, on the whole, the bottled water industry will mature very rapidly."

The European bottled water industry is a mature market whose

	Dollar volume	% change dollar volume	% of beverage department sales	Gross profit margin	Average assortment per store
1970	\$ 8.7	—	0.8%	26.4%	7
1973	4.6	-15.7%*	NA	22.1	5
1974	6.1	+32.6	0.2	26.4	1
1975	20.5	+236.1	0.7	25.1	3
1976	29.0	+41.5	0.9	25.7	4
1977	35.8	+23.4	1.0	27.6	4
1978	58.0	+62.0	1.4	29.6	5

Source: Beverage Industry, Inc.
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Beverage Industry, Inc., 1982

Ad outlays of the top 10 companies

	Advertising outlays	% of total
Total (January-September, 1979)	\$8,131.9	—
Great Waters of France, Inc.	4,062.4	50.0%
Foremost McKesson	1,429.4	17.6
San Gemini	664.1	8.2
Northwest Industries	468.6	5.8
Allan Beverages	438.0	5.4
Saratoga Vichy Spring Co.	218.6	2.7
Poland Springs Mineral Water Co.	198.7	2.4
Nestle	128.3	1.6
Mountain Valley Water Co.	101.1	1.2
Wometco Enterprises	73.0	0.9

Copyright: Beverage Industry
September 16, 1981

Overview of the estimated bottled water market by type

	Producers' prices (\$ million)	Gallons (millions)
Total U.S. market	\$443	521
Domestic purified: processed	301	391
Domestic mineral	37	104
Imported mineral	105	26

growth in sales is limited compared to this nation. Because the U.S. consumption of bottled water is, at this time, under-developed, European companies will probably continue trying to break into the U.S. market.

Joseph Cunningham, general manager for the Deer Park Spring Water Co., feels that it will be an uphill battle to bring the American mentality around to allow for such European expansion. Cunningham said, "We are more than 10 years away from this nation thinking about all the good things minerals can do for a person as they do in Europe."

White of Saratoga Springs also feels that it will be a long time before this country reaches market maturity as in Europe, yet he does see a changing attitude in the American people. "We anticipate an increasing use of sparkling water with meals in the European tradition."

Davis believes that to accelerate the amount of maturity in the American market, more education is necessary. "It is purely a matter of education to quicken the U.S. market toward maturity," he said. "If the manufacturer had the money to spend on the marketing of the product, in an educational sense, market maturity could happen faster but unfortunately this is not in today's media environment."

The bottled water market's unprecedented expansion will draw even more attention as the stakes grow larger. Whether for fashion or physical well-being, bottled water is quickly becoming a highly lucrative segment of the beverage industry.

Bottled water ad expenditures by major media

	As a % of total				
	Total	Spot T.V.	Magazine	Newspaper supplement	Outdoor
1973	\$ 862.3	97.1%	2.3%	—	0.6%
1974	1,479.4	98.6	1.4	—	—
1975	1,211.3	99.6	—	0.4%	—
1976	1,422.3	100.0	—	—	—
1977	2,813.3	100.0	—	—	—
1978	5,220.4	92.5	6.1	1.3	—

Copyright: Beverage Industry
September 16, 1981

Overview of the estimated bottled water market by distribution outlet

	Producers' prices (\$ million)	Estimated retail prices (\$ million)	Gallons (millions)
Total U.S. market	\$443	\$524.7	521
Home delivery	288.0	331.2	261
Commercial delivery	44.3	51.8	208
Retail outlets & supermarkets	110.7	141.7	52

Copyright: Beverage Industry
September 16, 1981

	Millions of gallons	Per capita consump- tion
1971	235	1.13
1975	245	1.15
1976	259	1.20
1977	290	1.29
1978	394	1.80
1979E	453	2.04
1980K	521	2.32
1985P	936	4.00

Imports of water by country of origin

Country of origin	Imports of water and ice in 1000 gallons			
	1977	1978	1979	1980
France	3,616	20,751	47,354	20,908
Mexico	133	110	242	239
Canada	1	60	1,851	1,689
West Germany	135	514	973	347
Italy	255	743	2,084	615
Total	4,325	22,438	53,713	25,089

Source: U.S. Census Bureau

Copyright: Beverage Industry

April 24, 1981

From France:

Quantity, August	2,604,543	1,361,722	-47.7
Quantity, year-to-August	18,983,881	3,862,785	-79.7
Value, August	\$ 5,357,509	\$ 3,007,264	-43.9
Value, year-to-August	\$35,355,538	\$ 8,789,249	-75.1

From Canada:

Quantity, August	146,459	125,294	-14.5
Quantity, year-to-August	454,344	472,701	+ 4.0
Value, August	\$ 359,690	\$ 235,824	-34.4
Value, year-to-August	\$ 1,108,735	\$ 1,083,711	- 2.3

From Italy:

Quantity, August	63,497	32,773	-48.4
Quantity, year-to-August	1,458,625	377,874	-74.1
Value, August	\$ 55,910	\$ 66,145	+18.3
Value, year-to-August	\$ 1,813,942	\$ 589,302	-67.5

Total: (all countries recorded):

Quantity, August	2,890,673	1,661,004	-42.3
Quantity, year-to-August	21,702,241	5,174,934	-76.2
Value, August	\$ 5,911,770	\$ 3,652,234	-38.2
Value, year-to-August	\$39,606,595	\$11,479,737	-71.0

Ocean Spray will debut 2 juices in Brik Paks



Ocean Spray Cranberries, Inc.'s aseptically packaged Cranapple and grapefruit juice products will be on store shelves throughout the New England and Albany, NY, areas this summer selling in 200 ml (6.8 fl. oz.) single service Brik Pak containers.

The co-op is the first company in the United States to offer a juice product in this package, which many feel will be one of the most influential new packages in the 1980s. Aseptically packaged liquid products have been in wide use throughout Europe and Canada for years, and recently a non-carbonated variety of Fanta was introduced by Coca-Cola in aseptic cartons in West Germany.

Ocean Spray's two juices will be available in shrink-wrapped three-packs and will retail for 89 cents, a 10% per oz. of product savings for the consumer, according to Harold Thorkilsen, Ocean Spray's president and chief executive officer. Thorkilsen said the reason Cranapple was selected over their cranberry cocktail for the package intro was because the Cranapple is more heat sensitive than the cranberry product, and they "wanted to demonstrate the benefits" of the

package with the product most susceptible to the aseptic technique.

packaging process

The aseptic packaging process involves the destruction of all bacteria in the product, the sterilization of the package and, after cooling, filling in a completely germ-free environment. Earlier in the year, the Food and Drug Administration approved the safe use of hydrogen peroxide and heat as sterilizing agents for the food contact surface of packaging material. The rectangular paperboard containers resemble cereal boxes, with a sterile foil lining inside. A straw is attached to the outside of each container.

The package is filled without head space (no air space at top), which not only lends the package a greater rigidity, but allows it to be stored without refrigeration until it is opened. Thus it can withstand long shipping and storage periods if necessary and can be stored and shipped at room temperature without reducing the life span of the product. The airtight containers have an approximate shelf life of four to six months.

At a recent meeting with area re-

tailers, Thorkilsen emphasized the tremendous cost efficiencies of this "flexible package." Citing upward spiraling can and bottle costs, Thorkilsen drew comparisons between the conventional 32 oz. bottle and a 1-L Brik Pak container, which Ocean Spray intends to debut this fall to complement the 200 ml size.

"Between 1975 and 1981, the costs of energy intensive glass and cans have gone up 66% and 101%, respectively," Thorkilsen told area retailers. "The 1-L flexible package costs 60% less than the 32 oz. bottle." He said warehouse and freight costs will be greatly reduced due to the brick-like configuration of the package. A packed case of 12 1-L juice containers occupies 52% less cubic volume than a case of 12 32 oz. juice bottles, he said, and 50% more cases of the 1-L containers can be shipped in a 40,000 lb. truck vs. the 32 oz. bottle — 1,500 cs. (liter) vs. 1,000 (32 oz. glass).

"Retail shelf space will also be more profitable — 36% more 1-L units than 32 oz. glass can be sold in the same shelf space," Thorkilsen said. The three-packs can be shelf displayed in their tertiary packaged corrugated trays — nine

three-packs (27 individual containers to a case) per tray — or can be displayed without the tray.

Thorkilsen said consumer research on the Brik Pak single service package showed acceptance in the three test markets — Boston, Minneapolis and Los Angeles. In-home placements were carried out and 83% of the test group said the new package did "not give the taste of the container," while only 57% answered similarly about the can. In a safety related question, 85% said the new package "was safer to open (use) with straw" vs. only 55% for the can, Thorkilsen said. Consumers were also impressed with the ease of disposability, he said. The package is easily compacted or incinerated.

However, Thorkilsen feels Ocean Spray's introduction of shelf-stable liquid concentrates sometime in the late fall for cranberry juice cocktail, Cranapple and grapefruit juice in 250 ml Brik Pak containers will have the greatest impact.

concentrates planned

"If ready to serve makes sense, why not take it one step further," he said. "Why not let the consumer add water like they do with a frozen concentrate. A shelf-stable liquid concentrate will offer an alternative to high-priced frozen juices." Thorkilsen said additional cost savings will be passed along to the consumer with the liquid concentrate package, and he hinted that the liquid concentrate could be more efficient than the three-to-one reconstituted frozen — "it can be reconstituted at a four-to-one ratio, or maybe five-to-one."

The advertising budget will be increased 60% to more than \$6 million for these introductions and Ocean Spray has earmarked \$30 million to promote the new package over a five-year period. Thorkilsen admitted "the consumer will have to be educated" about the package because it looks so different than anything the consumer has ever seen before. But he pointed to the

85% return of the people who participated in the market test as an encouraging sign.

The multi-media campaign is being prepared by Kelly, Nason Advertising, NY, and will include newspaper ads with cents-off coupons, four-color inserts, ads in women's service magazines and local 30 second TV spots. Creamer, Dickson, Basford, Inc. is handling the publicity and Thorkilsen said the public relations firm would be involved in the educational aspects of the campaign. If things go as planned, Ocean Spray will be nationally distributing its products in this package by the end of 1982.

Beverage Industry visited Ocean Spray's pilot plant in Middleboro, MA, where the package is being run. All equipment, except the heating unit, was purchased from Brik Pak Inc., Dallas, TX (the U.S. subsidiary of Tetra Pak International, Sweden), and the whole line "uses about half the space of our bottling line, and that's a conservative estimate," said Raymond A. Bourque, manager-packaging engineering for the co-op.

Bourque has been involved in evaluating and testing the Brik Pak equipment for the past three years. "This is a very efficient, very clean line," Bourque said. "The downtime on this line, compared to a bottling line, is minimal."

daily sterilization

Bourque said at the beginning of each day the processing equipment is run for about an hour so it is completely sterilized; it is run for a similar length of time at the end of each day to clean the equipment.

Brik Pak supplies the packages to Ocean Spray in large rolls of 45,000 cartons per roll. About every hour a new roll is put in place on the fly. The package is fed into the Brik Pak filler/packer and is sterilized in a hydrogen peroxide bath.

While the package is being sterilized, the juice is pumped from a vat into a Crepaco heating unit. The juice is heated to 210° F to kill

off all bacteria in the product. After about 30 seconds at that temperature, it's cooled to about 60° F and then is pumped through sterilized piping to the filler/packer.

The juice moves down the two-story filler/packer unit to the germ-free environment of the filling chamber, Bourque said. The product is held in a sterile, stainless steel tube which is enclosed by simultaneously descending paperboard and foil packaging material. The packaging material is separated into a rectangular form by two rapidly moving arm-like devices, which then wrap the material around the liquid. The lower arm forms the bottom of the container as the upper arm sweeps over the top, enabling the filled package to be enclosed without any head space and in an air-tight fashion.

The packages are conveyed to the straw applicator where hotmelt glue is affixed to the outside of the package and a short, cellophane enclosed straw is attached.

The package is then transported to the shrink-wrapper where the containers are grouped in threes and shrink-wrapped. They are then placed in corrugated trays; each holds nine three-packs.

Bourque said the line moves at 72 packages per minute, which he admits is slow compared with other packages. However, there are many benefits, he said, not the least of which is the reduced amount of plant space the line requires.

"The line is also much less noisy than the bottling line," Bourque said. "No water is used, no labeling equipment is required and, obviously, there is no need for a separate capper." In comparison with a bottling line, the Brik Pak packaging system is simplified and streamlined in appearance.

Bourque said a new machine, similar in appearance to the one running the 200 ml single service size, would be needed to run the 1-L Brik Pak. Ocean Spray is still considering whether to use Brik Pak or the Germany-based Combibloc system for the 1-L container.

"If ready to serve makes sense, why not take it one step further? . . . Why not let the consumer add water like they do with a frozen concentrate?"

Aseptic flexible packaging establishes itself in U.S.

Aseptic flexible packaging is finally establishing itself in the United States, having proved highly successful throughout much of the world during much of the 1970's and into the '80's.

There are two major international companies that are in heated competition right now for U.S. markets in this new flexible package: Tetra Pak in Sweden, or which Brik Pak Inc., located in Dallas, TX, is a subsidiary; and PKL (Papier Und Kunststoff-Werke Linnich GmbH) in West Germany, a fully-owned subsidiary of the Jagenberg Group, represented in North and Central America by Blocpak, Inc., located in Toronto, Canada.

The aseptic packaging process involves the destruction of all bacteria in the product, the sterilization of the package and, after cooling, filling in a totally germ-free environment. The flexible, paperboard packages resemble cereal boxes, with a sterile foil lining inside that provides for airtight sealing. Straws are attached to the outside of the single service size containers offered by Brik Pak and Blocpak equipment.

Since January 9, 1981, when the Food and Drug Administration approved the safe use of hydrogen peroxide and heat as sterilizing agents for the food contact surface of packaging material, Real Fresh, Inc. has been offering milk in 1-L Brik Paks throughout much of California, and more recently throughout the other 10 Western states.

Valley Fresh has been running its milk and chocolate milk products out of its Sumner, WA, facility in 1-L Brik Paks since May, and in late July began offering their apple, orange and grapefruit juices in 1-L Brik Paks. Valley Fresh will soon start running a 250 ml single service size package for its three juices using Blocpak's Combibloc filler.

In late July 1981, Ocean Spray Cranberries, Inc. began offering their Cranapple and grapefruit juice brands in 200 ml single service Brik Paks throughout the New England area. A 1-L size, possibly

using the Combibloc filler, will be offered shortly, as will shelf stable liquid concentrate in a 250 ml size.

Borden Inc. has begun marketing its orange juice product in 250 ml size Brik Paks in three undisclosed Southwest test markets this month.

According to a spokesperson at Brik Pak Inc., "several major food and beverage companies" will be in aseptically packaged Brik Paks "by the fall," in addition to the four just mentioned.

George Allan, director of marketing for Blocpak, Inc., told **Beverage Industry** that "a number of juice companies in the United States have our equipment on order." He said that though some of the companies might be offering their product in Blocpaks by the end of the year, most would not be in the package until early next year.

Cliff Coy, president of Valley Fresh, called aseptic, flexible packaging "definitely the wave of the future," but refused to go on record as to why he chose the challenger in the field, Blocpak, for Valley Fresh's smaller package, instead of the older, more established Brik Pak, which the company is currently using for its 1-L size flexible package.

stiff competition

Coy would not talk about the pros and cons of the top two aseptic, flexible packaging companies either. "I just don't want to get into that — there's pretty stiff competition between them right now."

Coy said Valley Fresh isn't making "a big push with milk in retail," concentrating on institutional sales, including the shipping and food service areas. He said the company is supporting the introduction of the juices with substantial advertising. The products are most heavily distributed in Washington, Alaska and Oregon, and will be available in the eight other Western states soon. The two milk and three juice products are all running off one Brik Pak filler and the three juices in the smaller size will

run off one combibloc filler, Coy added.

Gary Smith, sales manager, Western U.S., for Real Fresh, Inc., a milk manufacturer, said the company has been in the 1-L Brik Pak "for eight full months," introducing the package just a few days after the FDA ruling.

Smith said 1-L Brik Paks of milk are retailing in most of the major California supermarket chains, including Lucky's, Alpha Beta, Ralph's Markets and others. Since June, the package has been available in the 10 other Western states. Smith said one Brik Pak filler, with a line speed of one container per second, is supplying product to all states out of the company's Visalia, CA, facility.

When questioned about taste, Smith readily admitted a slight taste differential between milk out of a Brik Pak and milk out of a regular carton. "There is a slight flavor differential due to the fact that the milk in the Brik Pak is not aerated — there is no head space." Smith said if you pour the milk into a pitcher and put it in the refrigerator before you drink it, allowing air to contact the product, the milk will taste exactly the same as milk out of a carton.

The Brik Pak system allows airtight filling with no head space. The package need not be refrigerated by the manufacturer, distributor, retailer or consumer until it has been opened. Once the package has been opened, it will last about three to four days longer than milk in a carton, according to Smith. "The reason is because the product has been stored with an absence of bacteria. Milk in a carton has a head start toward spoilage" before it is opened, Smith said.

Smith said consumer education concerning the new package is very important. "It's shaped more like a cereal box. The consumer has to be assured that they can buy milk that is not refrigerated."

There have been extensive in-store demonstrations by the company to get people to try it, Smith

said. "We do a lot of selling off the demonstration," he said.

Smith said there is advertising support in all major markets, including newspaper ads in the big papers in all major cities and radio ads in most major markets.

Smith said he has noticed that swifter consumer acceptance has occurred in areas "conducive to recreation; anywhere where it is difficult to refrigerate." Salt Lake City is an excellent market because, Smith said, people there like to keep foods stored for long periods. The Montana area is also a good market because the distances between stores and homes are great, and people would rather make a few trips as possible to the store, Smith said. The same with Alaska, he added.

Smith admitted the processing costs are higher for the 1-L Brik Pak than for the quart carton. But there are also other savings in other areas. The fact the package doesn't have to be refrigerated in the warehouse or in the truck saves money. Smith also pointed out that it's a savings for the retailer too, since the product can be displayed on store shelves and not in refrigerated areas. "The retailer spends, on the average, three-and-one-half cents per quart every day on refrigeration costs alone," Smith said.

The 1-L Brik Pak retails for approximately 10 cents more than the one quart carton, Smith said. "But people will pay more for the convenience," he asserts.

At a recent meeting with New England area retailers, Harold Thorkilsen, Ocean Spray's president and chief executive officer, stressed the tremendous cost efficiencies of the flexible package over bottles and cans. He said the co-op's two juices will be sold in shrink-wrapped three-packs and will be retailing for 89 cents, a 10% per ounce of product savings.

Dr. William Roberts, vice president of Dairymen, Inc., said eight 250 ml Brik Pak lines and three 1-L Brik Pak lines will be housed in the plant. "We expect to build plants in other states" if all goes as planned, Roberts said.

Disconnecting milk from refrigeration in terms of the distribution system is what Roberts sees as the

most significant advantage of the aseptic, flexible package. But he was quick to add that this also "creates a great convenience for the housewife. And it permits the processor to guarantee its product to the consumer."

Roberts feels the American consumer will take to the new package more quickly than do others. "The American consumer is used to innovation. We have an experimental consumer in this country." Roberts also predicts that within about 5-10 years, the entire dairy industry will be into aseptic processing.

Thorkilsen said the co-op will be going with a 1-L size package by the fall to complement the 200 ml single service package. However, it was still uncertain as to whether the co-op would use the combibloc filler or the Brik Pak filler.

Concentrates for cranberry juice cocktail, Cranapple and grapefruit juice in 250 ml Brik Paks are also planned by Ocean Spray, he said. "A shelf-stable liquid concentrate will offer an alternative to high-priced frozen juices," Thorkilsen said. He added that the liquid concentrate could be reconstituted at a ratio greater than the three-to-one ratio provided by frozen concentrate.

ad support

Advertising support for the new package introduction will be extensive (radio, magazine and newspaper) and expensive (an initial outlay of \$6 million, with \$30 million earmarked to publicize and promote the new package over a five-year period).

The 250 ml container is being run at 72 a minute on one line out of the co-op's pilot plant in Middleboro, MA.

Tetra Pak, a privately owned company, introduced its first aseptic package in Switzerland in 1961 and its first aseptically packaged Brik Pak in 1969. Today, the company has placed approximately 1,500 machines in 50 countries. About 40 million Brik Paks a day are produced around the world — 16 billion packages were produced in 1980 alone, according to Rita J. Simpson, Brik Pak Inc.'s public relations manager. She said 97% of

the aseptic, flexible package world market belongs to Tetra Pak. Brik Pak, headquartered in Dallas, TX, was incorporated in 1977.

At Interpak in 1975, PKL launched the Combibloc cF 5,000 aseptic filling system for .5- and 1-L packages. In '78 PKL debuted the cF 6,000 aseptic filler for small containers in the 200 ml, 250 ml and .5-L size range. Currently there are approximately 150 Combibloc systems in operation.

One of the key differences between the two aseptic, flexible packaging systems is that Brik Pak fillers fill the package with no head space and the Combibloc filler allows head space.

Brik Pak's Simpson said the lack of air in the package "protects the nutritional value" of the product. She also said the airtight package can be stacked higher than if it contained head space.

Blocpak's Allan said the head space allows products with pulp or particulates to be filled in this type of package because it can be shaken. He also said there are less spillages upon opening with a package that does have some head space. However, he said that the company is about to debut new equipment that allows filling with head space but that flushes out all air, creating a vacuum.

Another difference between the two systems is the way the packages are shipped to the customer. With the Brik Pak system, the packages are on large rolls that have to be cut by the machine. With the Blocpak, the packages are in preformed cut blanks folded flat, allowing faster line speeds. However, the roll stock requires less inventory storage space.

Combibloc fillers can run more than one package size off the same machine, while Brik Pak fillers can only work with one size per machine.

Combibloc fills the 200 and 250 ml size packages at 5,000 per hour and the .5- and 1-L sizes at 6,000 packages per hour. Brik Pak is a bit slower, filling smaller sizes at 3,800 and the larger sizes at 4,500 an hour. Simpson said new Brik Pak machines that will equal the combibloc filling speeds will be available late next year.

Escalating TV costs signal shift to alternative media



Although soft drink advertising was up a healthy 6.2% in 1980 to \$252.7 million, many soft drink bottlers **Beverage Industry** contacted are voicing concern about exactly how and where parent companies are spending those millions of dollars.

Total soft drink advertising expenditure in '79 was \$238 million, up \$14.7 million last year, according to John Maxwell, **BI's** director of research/statistics. PepsiCo allocated almost \$10 million more toward advertising in '80, up a sharp

16% from '79, the greatest dollar increase by far of any soft drink company. Coca-Cola saw its ad budget rise by only 0.4%, not even up half a million dollars to \$76.2 million, though still higher than PepsiCo's \$71.3 million '80 expenditure. Dr Pepper, which overtook Seven-Up last year to become the number three soft drink, pumped in an additional \$2.5 million during '80, a 19.8% rise over '79 to \$15.1 million; and Seven-Up, a Philip Morris Co., increased its advertising in '80 by 4%, or \$1.3 million,

to \$34.3 million.

[Advertising expenditures in the beer industry in 1980 reached \$337.3 million, up 8% from '79's level. Schlitz and Pabst were the only leading producers to lower outlays last year. Miller, a Philip Morris Co., increased spending 18%, or \$13.5 million to \$88.5 million, while Anheuser-Busch, Coors and Olympia increased spending more modestly, according to Maxwell. See charts on p. 00.]

However, the way many soft drink bottlers see it, the issue is not

necessarily how much money is being spent, but whether parent companies are spending it locally or nationally, and whether it is being spent for TV advertising or for radio, print and outdoor advertising, as well as for point of purchase merchandising. Quite simply, bottlers are beginning to wonder if the parent companies are spending those dollars as effectively as possible.

In '80, the fact that 88.8% of total advertising dollars was spent on TV advertising, up from 71.9% in '79, has disturbed many bottlers, who feel more and more money is being spent on TV advertising without an accompanying greater ef-

fect. Even more disturbing to some bottlers is the following: \$84.3 million was spent on network TV advertising last year, accounting for 33.4% of all advertising, up from '79's \$48.9 million spent on network TV, 20.5% of total ad expenditure — in other words, dollars spent on advertising on network TV by the parent companies were up 72.4% last year, far above the largest dollar and percentage increase of any other advertising medium.

"We're not getting our money's worth," says a Pepsi bottler in California. "As the parent companies scramble to place more and more network ads — the FCC allows for a finite number of network ads —

it just drives the price out of sight. You've got to wonder how much of a benefit that is. Arbitron shows fewer and fewer people are watching TV. I think we should start taking a hard look at network TV. We're paying more and more to advertise to fewer and fewer people."

The California Pepsi bottler went on to say that "we are not very sophisticated in determining media weight levels. TV is still the best for cost per thousand reached, but we have to consider how much is enough. We might have already passed that point."

A number of bottlers contacted in a random survey also feel parent

Soft drink advertising expenditures

	Unit Volume Basis			Advertising Expenditures			
	Percentage Total Market	1980	Unit Vol. Change 1979/80	1979 \$Mil.	Pct.	1980 \$Mil.	Pct.
Coca-Cola							
Coca-Cola	23.9%	24.3%	1.7%	\$ 41.9	17.8%	\$ 38.0	15.0%
Sprite	2.9	2.9	3.6	9.7	4.1	11.2	4.5
Tab	3.0	3.2	10.8	13.8	5.7	13.7	5.4
Fanta	1.9	1.7	(8.4)	—	—	—	—
Mr. Pibb	0.8	0.7	(9.8)	1.7	0.7	1.3	0.5
Mello Yello	0.7	0.6	31.6	2.3	1.0	3.7	1.5
Fresca	0.4	0.4	4.0	8.3	2.8	8.2	3.3
Other	0.4	0.4	8.7	0.4	0.2	0.1	—
Total	34.5%	34.4%	4.4%	\$ 75.8	31.9%	\$ 76.2	30.2%
Pepsi-Cola							
Pepsi-Cola	17.9%	17.9%	3.3%	\$ 35.9	15.1%	\$ 42.3	16.7%
Diet Pepsi	2.9	2.6	8.5	8.7	3.7	12.0	4.8
Mountain Dew	2.8	2.9	8.3	8.4	3.5	10.8	4.3
7-Eleven Light	0.4	0.4	—	8.3	2.6	5.6	2.2
Twink	0.3	0.3	—	0.6	0.2	0.1	—
Adams	—	—	—	1.4	0.6	0.5	0.2
Others	0.3	0.3	(5.6)	0.2	0.1	—	—
Total	24.2%	24.4%	4.2%	\$ 61.5	25.2%	\$ 71.2	28.2%
Seven-Up (Philip Morris)							
Seven-Up	5.6%	5.4%	(0.9)%	\$ 28.1	11.0%	\$ 26.4	10.4%
Sugar-Free Seven-Up	1.1	1.1	0.6	5.7	2.4	7.9	3.1
Howdy Flavors	—	—	—	—	—	—	—
Dixie Cola	0.2	0.2	(10.0)	—	—	—	—
Quirst	—	—	—	1.2	0.5	—	—
Total	6.9%	6.7%	(0.9)%	\$ 33.0	13.9%	\$ 34.3	13.5%
Dr Pepper							
Dr Pepper	5.5%	5.5%	3.7%	\$ 9.6	4.0%	\$ 11.8	4.7%
Sugar-Free Dr Pepper	1.1	1.2	9.9	2.8	1.2	3.1	1.2
Others	—	—	—	0.2	0.1	0.2	0.1
Total	6.6%	6.7%	4.7%	\$ 12.6	5.3%	\$ 15.1	6.0%

(Continued)

Soft drink advertising expenditures (Continued)

Royal Crown							
Royal Crown	2.8%	2.8%	2.5%	\$ 7.8	3.3%	\$ 7.4	2.8%
Diet-Rite Cola	0.7	0.7	6.6	3.1	1.3	3.7	1.5
Nehl and Others	0.9	0.8	(5.7)	0.8	0.3	0.1	—
Total	4.4%	4.3%	1.4%	\$ 11.7	4.9%	\$ 11.2	4.4%
Crush International							
Hires, Crush, etc.	3.4%	3.2%	3.5%	\$ 1.5	0.6%	\$ 0.9	0.4%
Sun Drop	0.5	0.4	3.6	0.1	0.1	—	—
Total	3.9%	3.6%	3.5%	\$ 1.6	0.7%	\$ 0.9	0.4%
Canada Dry (Norton Simon)							
Canada Dry Beverages	1.9%	2.0%	8.3%	\$ 5.7	2.4%	\$ 8.4	3.3%
Barrelhead	0.3	0.3	(1.3)	1.4	0.6	1.5	0.6
Others	0.7	0.5	(18.4)	0.3	0.1	—	—
Total	2.9%	2.8%	1.2%	\$ 7.4	3.1%	\$ 9.9	3.9%
Dad's Root Beer (IC Indus.)							
Dad's Root Beer	0.6%	0.6%	1.8%	\$ 2.0	0.8%	\$ 0.6	0.2%
Diet Dad's	0.1	0.1	3.1	—	—	—	—
Bubble Up	0.3	0.3	(2.5)	1.2	0.5	0.4	0.2
Total	1.0%	1.0%	1.6%	\$ 3.2	1.3%	\$ 1.0	0.4%
Schwepes	1.0%	1.1%	16.1%	\$ 5.2	2.2%	\$ 4.8	1.9%
A&W Root Beer	0.9	1.0	7.4	5.5	2.3	5.5	2.2
Squirt	0.8	0.9	13.0	0.5	0.2	0.4	0.2
Faygo	0.4	0.4	(7.5)	0.2	0.1	0.2	0.1
Welch's	0.5	0.5	(3.2)	2.2	0.9	2.6	1.0
All Others	12.5	13.2		17.5	7.4	19.3	7.6
Total	100.0%	100.0%	3.1%	\$238.0	100.0%	\$252.7	100.0%

Sources: John Maxwell, Lehman Bros. Rumi Lobo Research, Leading National Advertisers Inc.

Copyright: John Maxwell
Beverage Industry
September 16, 1981

companies are becoming less and less willing to let the local bottler place ads. "Most bottlers have become more sophisticated in placing ads," the California Pepsi bottler continues. He says he could place a spot ad locally and, due to the reduced rates, pay 50% to 70% less than if the parent company placed that same spot ad from out of state. "I have more leverage locally than the parent company does nationally. It's easier to negotiate locally and get the price down."

The bottler even went as far as saying that "TV might have seen its heyday, at least for now," in terms of cost effectiveness. "During the coming years there will be tremendous innovation in advertising," the bottler predicts. He sees cable TV as a great source potential. He says that soon "companies [adver-

tisers] will sponsor a movie over cable, with a minute at the beginning and at the end. And a movie like 'Star Wars,' or something like that, would be an excellent vehicle for soft drink advertising, and would be a fresh alternative to the three networks." The bottler also mentioned cable stations such as ESPN (Entertainment and Sports Programming Network), a 24-hour sports station, as a viable alternative to network commercial TV.

The Pepsi bottler emphasized that the parent company wants to "take greater control of [advertising] funds," and that trends indicate parent companies are spending more and more on national network TV. The bottler pointed out that buying soft drinks is an "impulse buy. We're getting away from local promotion and point of pur-

chase merchandising, which is very important. With the heavy discounting that's going on, we have to get something that catches their [the consumers'] eye. We have to get people to differentiate."

A Pepsi bottler in North Carolina echoes much of what the California Pepsi bottler said. "Spending lots and lots of money on network TV is not the best way to get the most for our money. They're [the parent company] going to govern what you run anyway; it would be a lot better if parent companies give us, the bottler, more flexibility in order to do local promotions." The North Carolina Pepsi bottler said something as simple as T-shirts is a great promotion item. "We sold a hundred dozen T-shirts in less than five weeks to area retailers. We bought them at cost,

Soft drink advertising expenditures in 1980

(in per cent)

	1979	1980
Coca-Cola Company		
Coca-Cola	3.07¢	2.67¢
Sprite	5.88	6.55
Tab	8.00	7.29
Fanta	—	—
Mr. Pibb	3.95	3.33
Mello Yello	6.05	7.40
Fresca	25.20	31.54
Others	1.74	0.40
Total	3.92¢	3.77¢
PepsiCo		
Pepsi-Cola	3.51¢	4.01¢
Diet Pepsi	5.12	7.76
Mountain Dew	5.25	4.38
Pepsi Light	16.25	22.25
Teem	4.07	0.37
Others	5.22	3.53
Total	4.33¢	4.67¢
Seven-Up (Phillip Morris)		
Seven-Up	8.16¢	8.33¢
Sugar-Free Seven-Up	8.96	12.34
Howdy Flavors	—	—
Dixie Cola	—	—
Total	4.29¢	4.77¢
Dr Pepper		
Dr Pepper	3.08¢	3.65¢
Sugar-Free Dr Pepper	4.45	4.49
Others	—	—
Total	3.37¢	3.85¢
Royal Crown		
Royal Crown	4.91¢	4.54¢
Diet-Rite Cola	8.16	9.14
Nehi and Others	1.51	0.20
Total	4.68¢	4.42¢
Crush International		
Hires, Crush, etc.	0.78¢	0.48¢
Sun Drop	0.36	—
Total	0.73¢	0.42¢
Canada Dry (Norton Simon)		
Canada Dry Beverages	5.23¢	7.12¢
Barrelhead	9.03	9.80
Others	0.79	—
Total	4.56¢	6.03¢
Dad's Root Beer (IC Indus.)		
Dad's Root Beer	5.97¢	1.76¢
Diet Dad's	—	—
Bubble Up	7.50	2.56
Total	5.77¢	1.77¢
Schweppes	9.32¢	7.41¢
A & W Root Beer	10.19	9.48

(Continued)

sold them to the retailer at cost, they tacked on 50 cents or so to make a profit, and we have walking, community advertising." The bottler feels more things along those lines should be encouraged by the parent company.

"The parent companies are like the government, getting their fingers into our business and wanting to take more and more away from us," the bottler says.

"Each market is different," an Ohio Coke bottler insists. "Per capita's are different all over. How someone knows from hundreds of miles away what is going on here in this market, I don't know."

"I don't buy that more and more TV stuff that we keep getting from the parent company, he continues. "Instead of letting us do local advertising and promotions locally, all they [the parent company] want to do is spend more and more money on national TV."

The bottler suggested radio is a great summer advertising medium. According to Leading National Advertisers statistics, the amount spent on radio advertising last year was so small a figure that it is not even presented.

"People are outside in the summer, driving or at the beach or whatever. Radio is a natural. People aren't home watching TV." The bottler also pointed out that radio people will "bend over backward to accommodate you, while TV people don't do much for you."

A bottler willing to be identified is Richard J. Blajszak, vice president and manager of the Arkansas Beverage Co., Little Rock, AR. "People are losing sight of the fact that we're a fun-oriented industry. We've got to do something other than just run TV commercials," Blajszak says.

Addressing the national vs. local question, Blajszak was very matter-of-fact, saying, "Of course they like to cut their deals at the national level — the people they go out to lunch with. And the bottler would rather spend his money at the local level, with the people he associates with and with whom he feels he can get a better deal."

Blajszak would like to see more things like skywriting, robots, inflatables — promotions in the community that are fun and that would

Soft drink advertising expenditures

(Continued)

Squirt	1.05	0.74
Faygo	0.84	0.90
Welch's	7.10	8.67
All Others	2.44	2.68
Industry Average	4.18¢	4.30¢

Source: John Maxwell, Lehman Bros. Kuhn Loeb Research, Leading National Advertisers Inc.

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impact on the local consumer.

"But bottlers have to become more aggressive too. What Seven-Up is doing is a good idea," Blajszak says.

Guy L. Smith, vice president-corporate affairs for The Seven-Up Co., says the key word in their relationship with bottlers is "flexibility. Just because something won't work in Topeka," he says, "doesn't mean it won't work in, say, Cleveland.

"We develop separate local and national ad plans with the individual bottler and we decide together how much money will be allocated for each plan," Smith says. And he added that even when money is decided upon, if something comes up locally that the bottler feels is important, the parent company is "willing to accommodate local modifications" in the plan.

"You've got to take advantage of his [the bottler's] expertise," Smith emphasizes. "They're the ones in the front lines."

A spokesperson for Coca-Cola USA acknowledges that buying more network TV time "is a trend. We have found network buys to be efficient."

But the Coke spokesperson also points to the parent company's network radio buys on rock stations that began in May and will run into the fall in which different rock-and-roll stars do their own versions of the "Have A Coke And A Smile" jingle. And he also says more emphasis is being placed on local radio buys this year.

A parent company spokesperson who did not want to be identified, when told of many of its bottlers' complaints concerning network TV spending, says, "We are not locked

into it. We can always do something else. We aren't pouring concrete." He adds that "we will continue to work with our bottlers."

Another Coke bottler in Ohio expresses a view that is also common among bottlers who did not object outright to the "excessive" network TV expenditures.

The Pepsi bottler in California quoted previously was just one of a few who mentioned cable as an alternative to the three major networks.

"We reach young adults and can target in at the specific demographic audience soft drink people want," says Michael Presbrey, vice president-advertising sales with ESPN, the 24-hour sports cable station.

ESPN was established in September '70 and went 24-hours-a-day a year later. "In September of '79 we were in 1.4 million homes. Now we are in over 11 million homes and will be in a projected 12.5 million homes by the end of the year. We are adding homes at about 400,000 a month," Presbrey says.

Over 90% of new cable systems added include ESPN. Like Ted Turner's all news cable station, it is advertiser supported, which is why the consumer doesn't have to pay extra for it.

Presbrey says that ESPN has a \$3 to \$4 cost per thousand reach, compared with network TV's \$5 cost per thousand reach, although the ESPN figure is not from Nielsen, he says.

"We feel the national headquarters should support the bottler's local marketing efforts," says Dan Wolfson, director of public relations or Robert Keith & Co., Inc. The company manufactures giant

inflatables, an item that a number of bottlers mentioned as an excellent merchandising tool.

"Television is a passive medium. People just sit there and watch. When people are walking down a street or wherever and see a 20-ft. tall Pepsi can, for instance, they'll remember it," Wolfson says. He emphasizes that people remember it because it's their own personal experience in their surroundings, not on a TV tube.

Wolfson says the company has placed almost 100 soft drink inflatable bottles and cans in all major brands, and "hundreds" for the beer industry.

The average inflatable is 20 ft. tall and costs \$4,800 for a soft drink can or bottle. It's made of vinyl-coated woven nylon and a fan inside keeps a constant supply of air circulating, and even if there's a small hole, it won't deflate.

"Bottlers are part of their community and support their community," Wolfson maintains. "National TV ads don't evoke any response in a specific community. Our products create a response that matters."

Reaching a young audience will always be a major goal in soft drink advertising, and "comics can add a new dimension to soft drink advertising," says Vincent Karp, director of advertising sales with the Marvel Comics Group.

Marvel comics, 30 titles in all, are read by more than 15.7 million individuals each month. That's over 34.5% of America's population, ages 6-17, Karp says. "That's almost 40% of those 6-11, and 30.7% of all teenagers in the country."

Life magazine, as well as others such as Cosmopolitan and New Woman, are actively soliciting beverage industry advertising and, specifically, soft drink company advertising.

"The soft drink industry is a brand business — brand identification and awareness is an integral part. We're in the brand business too," says Charles Rubens, advertising sales director with Life. "Our size, quality of stock and lack of clutter provide soft drink companies with the best forum to rebuild and enhance their brand."

Beer advertising expenditures

	Percentage Total Market		Unit Vol. Change 1979/80	Advertising Expenditures			
	1979	1980		1979 \$Mil.	Pct.	1980 \$Mil.	Pct.
Anheuser-Busch							
A-B Natural Light	1.8%	1.4%	(16.7)%	\$ 17.4	5.6%	\$ 18.9	5.6%
Budweiser	17.5	19.6	13.0	29.5	9.4	32.3	9.6
Busch & Busch Bavarian	1.9	1.6	(12.5)	8.2	2.6	10.5	3.1
Michelob	4.7	4.9	6.3	15.4	4.9	13.6	4.0
Michelob Light	1.2	1.5	30.0	16.3	5.2	17.1	5.1
Wurzbarger	—	—	—	0.5	0.2	0.7	0.2
Other	—	—	—	—	—	0.7	0.2
Total	27.1%	29.0%	8.7%	\$ 87.3	27.9%	\$ 93.8	27.6%
Miller (Philip Morris)							
Lowenbrau	0.5%	0.7%	33.3%	\$ 17.0	5.4%	\$ 19.0	5.6%
Miller High Life	13.6	13.2	0.8	29.7	9.5	36.9	11.0
Miller Lite	9.6	7.5	17.9	27.7	8.9	32.5	9.6
Other	0.1	0.1	—	0.6	0.2	0.1	—
Total	21.0%	21.5%	3.9%	\$ 75.0	24.0%	\$ 88.5	26.2%
Schlitz							
Old Milwaukee	2.2%	2.3%	8.1%	\$ 5.7	1.8%	\$ 7.0	2.1%
Schlitz	6.1	4.4	(28.6)	25.5	8.2	19.7	5.8
Schlitz Light	0.3	0.2	(33.3)	6.6	2.1	0.2	0.1
Schlitz Malt Liquor	1.1	1.3	15.8	7.4	2.4	4.7	1.4
Erlanger	—	0.2	—	3.1	1.0	12.1	3.6
Other	0.1	0.3	—	—	—	0.4	0.1
Total	9.8%	8.7%	(10.7)%	\$ 48.3	15.5%	\$ 44.1	13.1%
Coors							
Coors	6.6%	6.6%	0.9%	\$ 11.3	3.6%	\$ 13.9	4.1%
Coors Light	1.0	1.4	43.8	3.7	1.2	7.0	2.1
Total	7.6%	8.0%	7.0%	\$ 15.0	4.8%	\$ 20.9	6.2%
Pabst							
Andefer of America	—	—	—	\$ 0.1	—	\$ 1.1	0.3%
Pabst	7.2%	6.5%	(8.9)%	11.9	3.8%	13.3	4.0
Pabst Extra Light	0.4	0.3	(14.3)	4.8	1.6	1.6	0.5
Other	1.2	1.9	52.4	1.6	0.5	1.7	0.5
Total	8.8%	8.7%	—	\$ 18.4	5.9%	\$ 17.7	5.3%
Olympia							
Hamms	NA	NA	NA	\$ 2.2	0.7%	\$ 1.6	0.5%
Olympia	NA	NA	NA	7.2	2.3	9.8	2.9
Olympia Golden Light	NA	NA	NA	1.9	0.6	1.8	0.5
Lone Star	NA	NA	NA	0.8	0.3	0.9	0.3
Other	NA	NA	NA	0.6	0.2	0.5	0.1
Total	3.6%	3.5%	1.7%	\$ 12.7	4.1%	\$ 14.6	4.3%
Helleman	6.6%	7.5%	15.0%	\$ 14.8	4.7%	\$ 13.6	4.0%
Stroh	3.6	3.6	1.6	11.3	3.6	11.1	3.3
Genessee	2.0	2.1	5.9	4.4	1.4	6.0	1.8
Schaefer	2.1	2.1	2.9	6.6	2.1	4.4	1.3
Schmidt	2.2	2.1	(5.3)	3.3	1.1	2.5	0.7
Others	5.6%	3.2%	(10.2)%	\$ 15.3	4.9%	\$ 20.1	6.0%
Total	100.0%	100.0%	3.2%	\$312.4	100.0%	\$337.3	100.0%

NA: Not Available

Sources: John Maxwell, Lehman Bros. Kuhn Loeb Research, Leading National Advertisers Inc.

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Powdered beverage sales

Per capita consumption of powdered drinks up scant 5.2%

Retail volume of powdered drink mixes

(Mil. gal. finished beverage equivalents)

	1977		1978		1979		1980		Volume Change 1979/80
	Vol.	Pct.	Vol.	Pct.	Vol.	Pct.	Vol.	Pct.	
General Foods									
Kool-Aid*	508.0	48.3%	506.0	45.5%	491.4	44.7%	486.5	43.7%	(1.0)%
Kool-Aid†	151.0	14.4	149.6	13.5	153.4	13.9	165.9	14.9	8.1
Country Time	50.0	4.8	61.7	5.5	72.8	6.8	72.4	6.5	(0.5)
Total	709.0	67.5	717.3	64.5	717.6	65.2	724.8	65.1	1.0
Coca-Cola									
Hi-C	—	—	46.7	4.2	44.4	4.0	37.5	3.4	(15.5)
Minute Maid	—	—	34.3	3.1	36.6	3.3	40.3	3.6	10.1
Total	—	—	81.0	7.3	81.0	7.3	77.8	7.0	(4.0)
Borden									
Wyler	105.0	10.0	78.2	6.9	63.0	5.7	65.0	5.8	3.2
Borden Prize	13.0	1.2	5.5	0.5	1.0	0.1	—	—	—
ReaLemon Crystals	—	—	—	—	—	—	9.0	0.8	—
Total	118.0	11.2	83.7	7.4	64.0	5.8	74.0	6.6	15.6
R. J. Reynolds									
Hawaiian Punch*	—	—	52.3	4.7	37.0	3.4	29.1	2.6	(21.4)
Hawaiian Punch†	75.0	7.1	53.9	4.8	51.8	4.7	44.4	4.0	(14.3)
Total	75.0	7.1	106.2	9.5	88.8	8.1	73.5	6.6	(17.2)
Pillsbury									
Funny Face	24.0	2.3	16.9	1.5	—	—	—	—	—
Squoze	14.0	1.3	2.5	0.2	—	—	—	—	—
Total	38.0	3.6	19.4	1.7	—	—	—	—	—
Lipton Lemon Tree	—	—	—	—	21.0	1.9	23.0	2.1	9.5
Private Labels & Others	110.7	10.6	106.4	9.6	128.6	11.7	140.2	12.6	9.0
Total Market Volume	1,050.7	100.0%	1,112.0	100.0%	1,101.0	100.0%	1,113.3	100.0%	1.1
Total Sales (\$ Mil.)	\$500		\$530		\$552		\$629		

*Unsweetened

†Presweetened

Source: Lehman Brothers Kuhn Loeb Research estimates

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Beverage Industry
September 15, 1981

In 1980, per capita consumption of powdered beverages was 6.1 gallons. This was up from the 5.8 gallon mark of the previous year.

Retail volume of powdered drinks rose a modest 1.1% in 1980. However, due to price increases (mostly in reaction to high sugar prices) the sales dollar total jumped 14% over 1979.

General Foods maintained its dominant position in the market with a share of 65.1%. The year's strongest company in terms of percentage growth was Borden, which rose 15.6%. During 1980 Borden introduced ReaLemon Crystals, which captured an 0.8 share. Lipton Lemon Tree came in with an impressive gain of 9.5% in its sec-

ond year; private labels and others continued the growth of that category, increasing 9%.

In the instant breakfast segment, volume fell 10% while dollar sales rose 9%. The volume decline was attributable to relatively low prices for competing orange juice, but we can expect a reversal this year due to the frost affecting the citrus crop

Retail volume of instant breakfast drinks

(All, gal. equivalents, water-based beverages only)

	1974	1975	1976	1977	1978	1979	1980	Change 1979/80
General Foods								
Tang	62.0	56.6	54.9	65.0	68.3	68.3	61.5	(10.0)%
Start	1.9	1.2	0.7	0.3	0.1	0.1	0.1	—
Borden								
Instant Breakfast	13.0	13.1	11.1	10.0	7.5	6.0	5.2	(13.3)
Private Labels & Others	16.1	11.1	11.7	9.7	12.5	14.2	12.9	(9.2)
Total Volume	93.0	82.0	78.4	85.0	88.4	88.6	79.7	(10.0)
Total Sales (\$ Millions)	\$92.6	\$106.2	\$98.0	\$106.8	\$111.7	\$119.0	\$129.7	9.0

Source: Current & Future Food Labels Research estimates

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Beverage Industry
September 15, 1981

Institutional food service sales of concentrated drink mixes

(Millions of gallons)

	1976	1977	1978	1979	1980E	Change 1979/80	1980 Market Shares Powders	Total
Powders								
General Foods								
Twist	5.2	5.4	5.7	6.3	8.8	39.7%	16.8%	5.2%
Amstar								
Dominade	3.6	4.1	4.6	3.2	3.5	9.4	6.7	2.1
Nestle								
Keen	2.9	2.9	3.4	2.4	2.6	8.3	5.0	1.5
Borden								
Wylor's	2.0	2.2	2.3	2.3	2.3	—	4.4	1.4
Standard Brands								
Royal	3.1	3.1	3.1	3.2	3.5	9.4	6.7	2.1
Iroquois Grocery Products (Cramore)								
Dri-Syrups	0.8	0.8	0.8	0.9	1.0	11.1	1.9	0.6
Crystals	0.4	0.4	0.4	0.5	0.6	20.0	1.1	0.4
Total	1.2	1.2	1.2	1.4	1.6	14.3	3.0	1.0
Private Labels & Others	22.4	25.9	28.1	29.9	30.0	0.3	57.4	17.8
Total Powdered Volume	40.0	44.8	48.4	48.0	52.3	9.0	100.0%	31.1
Syrups	100.0	110.0	115.5	114.3	116.0	1.5		66.9
Total Drink Mix Volume	140.0	154.8	163.9	162.3	168.3	3.7		100.0%
Total Sales (\$ Mil.)	\$106	\$111	\$116	\$119	\$135	13.4%		—

Source: Lehman Brothers Kuhn Loeb Research estimates

Copyright: John Maxwell,
Beverage Industry
September 15, 1981

and consequent higher prices.

The institutional area of the drink mix market increased its volume as well as sales in 1980. The powdered group gained 9% year to

year, while syrups for noncarbonated drinks rose 1.5%. General Foods came on strong with an increase of 40%. Iroquois Grocery Products also gained impressively,

rising 14.3%. Most of this group's gain is attributed to price increases for competing soda products, and the hot and dry weather in most of the country last year.

Packaging 'mix' shows impact of plastics growth

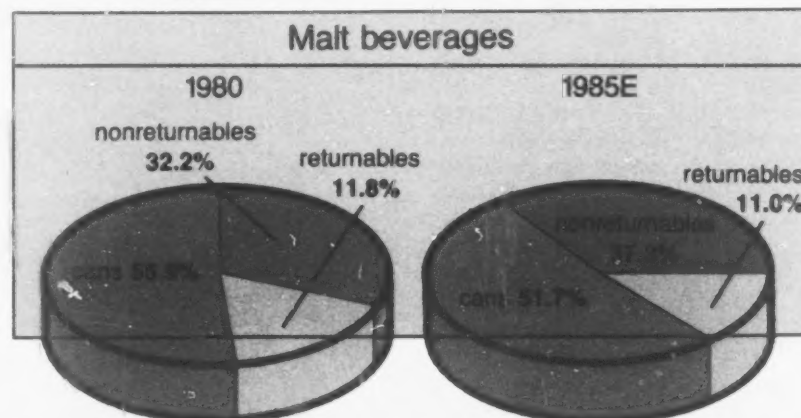
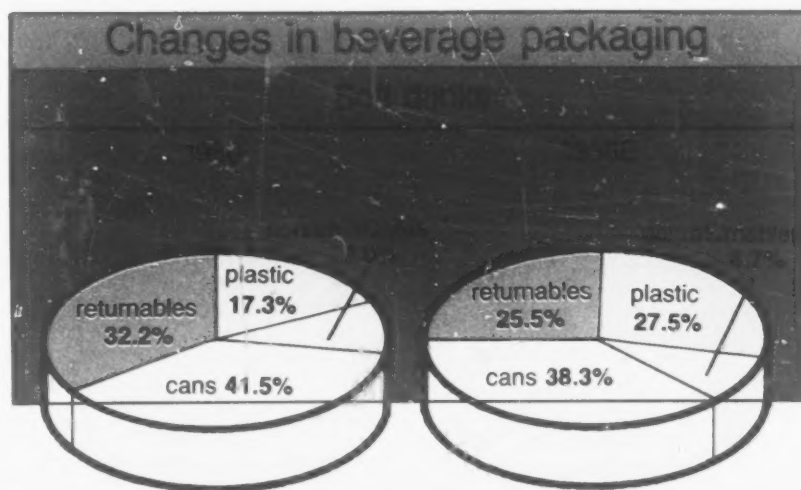
Whether you're talking about bottles, closures, labels or even cans, the big news in primary beverage packaging this year is plastic.

At present, plastic makes up a relatively small part of the beverage packaging spectrum. For instance, in bottles, the market sector plastic has penetrated most successfully, glass still holds a more than substantial lead. Industry sources seem to agree that 2 billion 2-L and 125 million 1-L PET bottles were shipped during 1980, compared to the 7.7 billion glass soft drink bottles the Dept. of Commerce says were shipped during the first 11 months of that year alone. Adding on the 15.7 billion glass beer containers shipped between January and November yields a total glass shipment figure of 23.4 billion units.

But with a 1980 shipment figure of 2 billion units, the 2-L PET bottle accounted for 13-16% of the total packaged beverage market last year, according to figures supplied by Arthur Stupay, partner-analyst with Prescott, Ball & Turben, Cleveland, OH. That is particularly impressive since, as Stupay points out, "volume rose from virtually a zero base in 1977."

In addition, the flurry of activity in the plastic sector during recent months indicates that the plastic packaging market is not only thriving, but growing by leaps and bounds. For example:

- The new CIB-24 blowmolder developed by Van Dorn Plastic Machinery Co. will reportedly produce .5-L PET bottles quickly and inexpensively.
- B&H Mfg., Ceres, CA, has developed a way to laminate two plastic materials — polypropylene film and polystyrene foam — together to form a new type of label similar to the one used on Plasti-Shield bottles — but, the firm says, with better graphic quality. B&H adds that the Im Pac label gives bottlers



Beverage industry estimates based on past historical performance, plus association and analyst results.

Copyright: Beverage Industry
March 13, 1981

the option of buying plastic or glass containers already labeled, or applying the label themselves with the BH-200-6, also available from B&H.

- A number of plastic beverage cans have been introduced on the market, including the Gilbert HDPE container being used by CBS Beverages for Best Iced Tea and the Hercules polypropylene container. Although both are presently used only for noncarbonated beverages, the Plastona plastic can is already being marketed in Europe as a package for carbonated

drinks, and a plastic Pepsi can has surfaced in limited quantities in the South.

Plastic is far from penetrating the beer packaging market as effectively, but certain inroads have been made. For instance:

- Olympia Brewing Co., Tumwater, WA, has introduced the Kegger 82, a spherical beer keg made of high-density polyethylene.
- At the NSDA show last November, Nissei America unveiled a plastic container which many feel will become the beer package of the future: a co-extruded plastic bottle

consisting of a thin inner layer of PET covered by an outer skin of acrylonitrile. The problem with using PET for beer is the tendency of the container to allow CO₂ to seep out. Observers say the better barrier characteristics of acrylonitrile may enable the Nissei bottle to overcome that problem.

• At the same time, the fight to reinstate the acrylonitrile bottle for spirits — and some say beer — is still being waged, and with some success. **BI** reported recently that Coors may go so far as to test-market an AN bottle in Europe, where the material has been approved for use in beverage packaging.

what's next?

The big question — “the question,” according to Stupay — is “where does the PET plastic bottle go from here?”

“Certainly, the 2-L plastic beverage bottle will continue to rise, probably in the 10-15% range, in line with consumption,” Stupay says. “More than 2.2 billion 2-L bottles will be used in 1981, plus 100-200 million 1-L units.”

In addition, he points out that the number of blowmolding machines in operation has continued to rise, indicating that plastic bottle suppliers are anticipating a healthy growth in demand.

In 1978, only 85 units were blowmolding PET bottles. The next year, the total increased 183% to 240, and in 1980, the figure rose to 260.

But, Stupay says, on the negative side, “the market for 1-L PETs has stalled,” and “other applications in liquor, wine and non-foods have not materialized or are small factors.”

What then is plastic's ace card for the future? “The new threat from plastic,” says Stupay, “is the .5-L PET.”

“In 1981,” he continues, “we will have the .5-L in several test markets. Perhaps 100 to 200 million will be produced . . . the package that could not exist is here.”

Nevertheless, Stupay cautions that “the rationale for use of the .5-L plastic beverage bottle is not as compelling as for the 2-L PET. This latter package was lighter and

Glass shipments

(thousand gross)

	11 months, 1979	11 months, 1980	% of change
Beverage, returnable	5,532	4,287	(22.5)
Beverage, nonreturnable	45,524	48,916	7.5
under 10 oz.	1,749	1,603	(8.3)
10.0-15.9 oz.	19,130	17,023	(11)
16.0-16.9 oz.	16,168	23,424	44.9
17.0-33.9 oz.	6,362	5,347	(16)
34.0 oz. and up	2,115	1,192	(43.8)
Beer, returnable	2,562	1,850	(27.8)
Beer, nonreturnable	103,152	107,060	3.8
under 11 oz.	16,867	18,701	10.9
11.0-15.9 oz.	81,220	82,838	2
16.0 oz. and up	5,065	5,523	9

Source: Dept. of Commerce

Copyright: Beverage Industry
March 13, 1981

PET bottle demand

(billion units)

	1978	1979	1980E
Production of 2-L	.6-.7	1.5-1.6	2.0
Production of 1-L		.1	.1
Total expected production	.6-.7	1.6+	2.1

*2-L equivalents

Source: Arthur Stupay

Copyright: Beverage Industry
March 13, 1981

Closure shipments

(thousand gross)

	10 months, 1979	10 months, 1980	% change
Soft drinks, total	100,169	93,099	(7.1)
crowns	90,396	77,102	(14.7)
convenience	9,823	15,997	62.9
Beer, total	118,965	133,832	12.5
convenience	87,420	107,270	22.7
conventional	31,545	26,562	(15.8)

Source: U.S. Dept. of Commerce

Copyright: Beverage Industry
March 13, 1981

Supply, demand, and operating rates for PET bottles

Machines	1978	1979	1980E
RHB-V (Cincinnati Milacron)	75	145	155
Nissei	5	57	65
Corpoplast	5	22	24
CSM-1000 (Cincinnati Milacron)	—	10	10
RHB-VI (Cincinnati Milacron)	—	6	6
Total	85	240	260

Source: Arthur Stupay

Copyright: Beverage Industry
March 13, 1981

break-resistant compared to glass, and its use was therefore an advantage to the consumer."

As for the .5-L, he continues, "machine capacity is a limitation in 1981. Also productivity, shelf life and economics are not fully established and competitive with cans or glass."

But, as Stupay says, "the .5-L market is enormous, accounting for almost 20% of packaged soft drink sales . . . it will be hard to stop plastics if economics are roughly comparable with glass."

With that situation, he says, "a battle royal is shaping up."

glass gains in '80

The .5-L PET faces a tough fight ahead if indeed it is going to gain some of the ground now held by glass, judging from shipment figures from the Commerce Dept. During the first 11 months of 1980 shipments of glass soft drink containers in the "16.0-16.9 Oz." range, which includes the .5-L size, climbed to 23.4 million gross, a 44.9% increase over the same period in 1979. Although shipments of all other types of nonreturnable glass soft drink containers declined during the 11 month period, the performance of 16.0-16.9 oz. size was strong enough to boost overall nonreturnable shipments 7.5% to 48.9 million. The figure for 1979 was 45.5 million gross.

Leading the decline in shipments of other types of nonreturnable bottles was the "34 oz. and up" category. Shipments of glass containers in that size range fell 43.6% during the first 11 months of 1980, yielding a total of 1.1 million gross compared to 2.1 million for the same period in '79.

Shipments of bottles in the "under 10 oz.," "10.0-15.9 oz.," and "17.0-33.9 oz." categories also declined, with drops in volume of 8.3%, 11% and 16% respectively.

Returnable soft drink bottles also fared poorly between January and November of 1980, with shipments dropping 22.5% from the previous year to 4.2 million gross.

If last year's shipment figures are any indication, whatever ground glass loses to plastic in the soft drink market will likely be more

than made up in the beer industry. With the exception of returnable beer bottles, which suffered a 27.8% decline in shipments, all other categories of beer containers showed an increase in shipment volume.

Leading the way was the "under 11 oz." classification, with shipments increasing 10.9% to 18.7 million gross. Shipments of bottles in the "11.0-15.9 oz." range were also

on the rise, increasing from 81.2 to 82.8 million gross.

Overall, shipments of nonreturnable beer bottles jumped from 103.1 million gross to 107 million, an increase of 3.8%

Cans did not fare as well in 1980. According to figures from the Can Manufacturers Institute, shipments of all types of beer cans were up in volume by only 1.7%, and shipments of soft drink cans suffered

Estimated plastic beverage bottle cost structure

Cents per unit	2-L	.5-L
Materials	\$12.5	\$4.0
Energy	0.8	0.4
Labor	2.4	1.5
Depreciation and other	3.0	1.0-1.5
Total*	18-19	7.0-7.5

*Excludes labels and secondary packaging. For .5-L, such costs could add 1.2 cents per unit.

Source: Arthur Stupay

Copyright: Beverage Industry
March 13, 1981

Beverage can shipments

(millions)

	1979	1980	% Change
Soft drinks			
Two-piece aluminum	12,296	15,954	29.7
Two-piece steel	5,351	5,916	10.6
Three-piece	8,064	3,871	(52.0)
Total	25,711	25,741	0.1
Beer			
Two-piece aluminum	21,378	25,623	19.9
Two-piece steel	5,669	3,294	(41.9)
Three-piece	1,684	581	(65.5)
Total	28,731	29,498	2.7

Source: Can Mfrs. Institute

Copyright: Beverage Industry
May 8, 1981

Soft drink demand and packaging

(billion 12 oz. units)

	1979	1980E	1981P
Total soft drink demand,	87.9	92.5	97.0
% packaged	77.7	76	75
Packaged soft drinks	68.2	70	72
% in 2-L	14-15	16-18	18-19
2-L volume,	10.0	12	13-14
% in plastic	80-85	85-90	90
2-L PET volume	8.5	11	12-13
Actual 12 oz. units	1.5+	2.0+	2,200-2,300

E = estimated; P = projected

Source: Arthur Stupay

Copyright: Beverage Industry
March 13, 1981

Shipments of non-alcoholic glass beverage bottles, returnable vs. non-returnable

(in millions)

Year	Total unit shipments of glass non-alcoholic beverage bottles	Unit shipments of returnable glass bottles	As a % of total	Unit shipments of non-returnable glass bottles	As a % of total
1972	10,232	1,454	14.2%	8,777	85.8%
1973	10,224	1,211	11.8	9,013	88.2
1974	9,451	1,040	11.0	8,411	89.0
1975	9,276	1,096	11.8	8,180	88.2
1976	9,373	1,252	13.4	8,121	86.6
1977	9,715	1,030	10.6	8,685	89.4
1978	8,841	919	10.4	7,922	89.6
1979	7,919	869	11.0	7,051	89.0
1980E	8,165	625	7.7	7,541	92.3
1990P	9,512	775	8.1	8,737	91.9

Source: U.S. Dept. of Commerce;
Business Trend Analysts

Copyright: Beverage Industry
July 10, 1981

a slight (.3%) decline.

The three-piece can took another step toward obsolescence last year, particularly in the beer industry. Shipments of three-piece beer cans fell by 65.2% to 529 million units for a 2.1% share of market.

The damage was almost as severe in the soft drink sector: shipments of the three-piece soft drink can fell 50.5%, reducing its market share from 32.2% in 1979 to 16% last year.

On the positive side, two-piece

cans, particularly those made of aluminum, continued to post gains. In the beer industry, use of the drawn-and-ironed can were up 6% last year, with shipment volume rising by 1.4 billion units to 24.5 billion.

U.S. shipments of non-alcoholic glass beverage bottles by size

(in millions of units)

	1977	1978	1979	1980
Beverage bottles, total	9,715.1	8,841.2	7,919.3	8,165.4
returnable	1,030.3	919.0	868.8	624.7
non-returnable	8,684.8	7,922.2	7,050.5	7,540.7
under 10 oz.	300.5	361.4	267.1	239.3
10.0-15.9 oz.	3,277.8	3,329.3	2,933.0	2,572.2
16.0-16.9 oz.	2,602.1	2,298.0	2,526.9	3,771.4
17.0-33.9 oz.	1,383.0	1,211.0	999.2	790.9
34.0 oz. & over	1,121.3	722.4	324.3	166.9

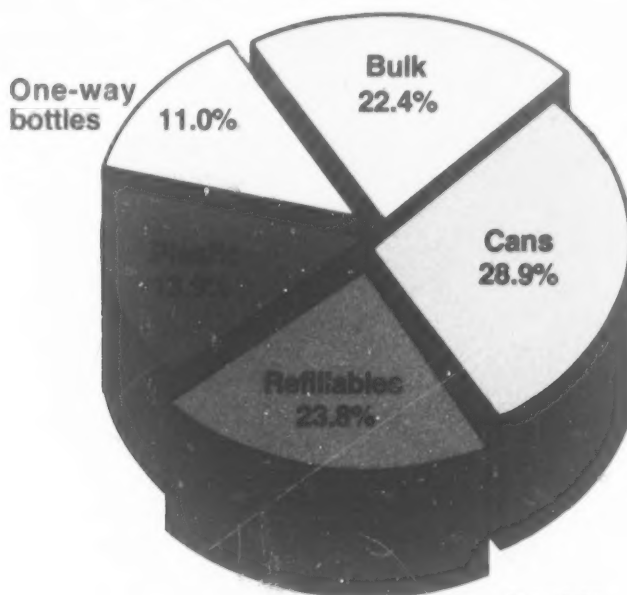
Percentage Distribution

	100.0%	100.0%	100.0%	100.0%
Beverage bottles, total	100.0%	100.0%	100.0%	100.0%
returnable	10.6	10.4	11.0	7.7
non-returnable	89.4	89.0	89.0	92.3
under 10 oz.	3.1	4.1	3.4	2.9
10.0-15.9 oz.	33.7	37.7	37.0	31.5
16.0-16.9 oz.	26.8	26.0	31.9	46.2
17.0-33.9 oz.	14.2	13.7	12.6	9.7
34.0 oz. & over	13.0	8.2	4.1	2.0

Source: U.S. Dept. of Commerce;
Business Trend Analysts

Copyright: Beverage Industry
July 10, 1981

1980 market shares



Source: NEDA

Copyright:
Beverage Industry
August 7, 1981

However, that growth in two-piece can shipments came solely from aluminum. Shipments of drawn and ironed containers were up 19%, yielding a total of 21.6 billion units or 86.5% of the total beer can market. In contrast, shipments of two-piece steel cans declined 41.6% to 2.8 billion.

In the soft drink sector, the two-piece steel can fared much better. Shipments of the container were up 12.4%, raising its market share 2.5 percentage points to 23%. However, the drawn and ironed steel soft drink can is still far behind the two-piece aluminum container, with 5.2 billion of the former shipped during 1980 compared to 13.8 billion of the latter.

Overall, shipments of aluminum soft drink cans jumped by 28.5% to 13.8 billion units, giving that container a 60.9% share of the to-

tal soft drink can market.

The rise in glass bottle shipments during 1980 is directly reflected in the figures for closure shipments. Shipments of all types of the latter packaging element increased 3.3% during the first 10 months of 1980, compared to an increase in total bottle shipments of 3.6% for the first 11 months of the year.

For closures, the biggest increase in shipments came from the convenience type. Overall shipments of convenience closures for both beer and soft drink bottles rose 26.8%, yielding a 10 month total of 123.2 million gross.

Most of that growth came from a step up in shipments of convenience closures for beer. According to the Commerce Dept.'s figures, shipments were up 22.7%, translating into an increase of 19.8 million gross. With a 10 month shipment

total of 107.2 million gross, convenience closures make up 80% of the total beer closures market.

In contrast, convenience-type closures account for only 17.2% of all closures used on soft drink bottles, with 15.9 million gross shipped during January through October of 1980. However, that figure is 62.9% higher than the total for the same period in '79, indicating that use of the convenience closure for soft drink bottles is on the rise.

Conversely, 14.7% fewer metal crowns were shipped during the first 10 months of last year than in January through October of 1979. Although crowns still account for a healthy 82.8% of all soft drink closures shipped during the 10 month period, the volume dropped from 90.3 million gross during that period in '79 to 77.1 million last year.

Shipments of nonrefillable soft drink bottles

(thousands of gross)

Size	'78	percent change	'79	percent change	'80	percent change	Jan.-Feb. '81
10-15.9 oz.	22,245	(8.4)	20,368	(9.4)	18,455	(11.2)	2,285
16-16.9 oz.	15,538	(12.6)	17,548	49.2	28,174	32.7	4,010

Source: Dept. of Commerce

Copyright: Beverage Industry
June 28, 1981

Use of plastic returnable cases on rise for 2-L PETs.

The growing popularity of the plastic 2-L PET (polyethylene terephthalate) bottle has prompted many bottlers to search for cheaper and more efficient ways to handle the bottle.

According to a number of regional bottlers contacted by **Beverage Industry**, that effort has sparked a trend — the use of plastic returnable cases for 2-L PETs.

However, there's a catch. The only way the bottler can realize a big savings with the returnable case is if PET suppliers ship their product in bulk form — without the corrugated carton. Therefore, it is not surprising a **BI** survey of major PET bottle manufacturers reveals that virtually all either currently offer 2-L PET shipments in bulk or will begin to ship containers that way in the near future.

"The PET [bottle] is really growing," says a spokesman for the plastic bottle division of The Continental Group. "You can tell by the way it's being packaged. It's moving to bulk just the way cans and bottles did. Cans and bottles started in cartons of six, then eight and now bulk. That's the direction the 2-L PET is going."

The ability to be handled more cleanly, increased stackability, and the larger shipment quantities are reasons for the move to bulk packaging of PETs, the spokesman says. He adds that the demand from the bottlers to go to bulk so they can use the returnable case instead of the corrugated seems to be on the rise.

initial expense

The initial expense of going to bulk shipping is sizable for the supplier. Though not quite as large an expense for the bottler, the initial purchase of large quantities of the returnable cases is not a minor investment.

"Although an initial investment is required, in the long run it will pay off," says Larry Beres, general manager-operations with National Can Corp., a PET bottle manufacturer.

"We're encouraging people who have sizable volumes to go with bulk."

Beres says there are substantial savings to be had for the supplier and the bottler. "Going to bulk shipments," he says, "will allow us to eliminate the cash costs of corrugated. Also, we should be able to cut labor costs because bulk gets us into a more highly automated line. Increased pallet sizes are also an obvious benefit for everyone. The economies and the efficiencies are there in bulk."

Most bottlers need little encouragement to switch to bulk handling. Although outlays for new bulk depalletizers, or "deunitizers," is a major cost, the savings on the horizon look great indeed.

With the plastic returnable case for 2-L PETs the bottler, instead of returning the PET to a corrugated carton after filling, puts the PETs in the plastic cases, delivers them to

their destination and some time later the case is picked up and used again. To a growing number of bottlers with sizable volumes, this makes more sense than having the supplier ship the empties to them in the corrugated cartons and, after filling, returning the bottles to the cartons, delivering them and throwing the corrugated away.

"The average corrugated carton costs 30 cents. It's used once and it's thrown away," says Tom Dexter, general sales manager with Tedruth Plastics, Fesco Div., Cities Service Co., a manufacturer of a returnable plastic case for 2-L PETs. "A plastic returnable is \$3. We offer a five-year warranty on our returnable case. After you make 10 trips, you've paid for the case and the rest is all savings on what you'd still be paying for corrugated."

Dexter believes it's the PET suppliers that need to be encouraged to



Pyramid's reusable Plasticase for 2-L bottles.

ship in bulk. "I'd say that 90% of all bottlers would be using the plastic case if they could get their PETs from the supplier in bulk and did not have to pay for the corrugated," Dexter says. The suppliers have to be pressured into bulk shipping Dexter says.

"The PET manufacturers have a lot of money tied up in equipment — like case packers, box formers, case palletizers — that would not be used if they went to bulk. So they're dragging their feet. They have to pay off the equipment first. They just didn't foresee a returnable package for a nonreturnable product," Dexter maintains.

Most PET bottle manufacturers, however, appear to have little reluctance about 2-L PET bulk shipping.

"We're bullish on it," says Joe Klass, national marketing manager of Amoco Container Corp. in Atlanta, GA. "It's a beneficial approach. We're expanding our bulk capabilities."

"There's a lot of interest in bulk," says Charles Sewell, president of Sewell Plastics, another major PET bottle supplier. "With the kind of interest we've been seeing, I expect to be doing more bulk business in the future."

Abtex Beverage Corp., a Pepsi bottler in Abilene, TX, will begin to use the plastic returnable case for their 2-L PETs in about a month. At the same time, their supplier, The Continental Group, will start shipping to them in bulk.

initial outlay

Though the initial capital outlay for the plastic cases is high, John Kimbro, general manager for Abtex in the Abilene area, says, "In about eight weeks, the cases will have paid for themselves. There is a slight cost in returning the carrier, but the long-run savings is still substantial." Abtex's local competitor, Texas Coca-Cola Bottling Co., Inc. started using the returnable PET case in early November of last year.

Regionally, the South, and especially Texas, is a big user of the returnable case. Steve Sowell, advertising manager with Rehrig-Pacific Co. in Erie, PA, a manufacturer of the returnable case, thinks there are

several reasons for this.

"Firstly, there is a co-op [Western Container] made up of quite a few bottlers in Texas. They make their own PETs and only ship them in bulk. Also, many parts of the South weren't hit as hard financially, in terms of inflation, as were the Northeast and other areas," Sowell says.

variety

There are several different types of cases currently available. The most popular types seem to be a three- or six-cell, medium- or full-depth case.

"We make a full-depth, three-cell plastic case," says Rehrig-Pacific's Sowell. "Two PET bottles to a cell. This allows a [Mead] Cluster Clip package, or whatever other type of package the bottler wants to use."

"Our six-cell, medium depth 2-L returnable PET case will be out in April," says Jack Tate, president of Pyramid Sales Co., Inc., also in Erie, PA. "It is lightweight. It has a five inch opening on all four sides to give a completely unobstructed view of the label. It cross bond stacks."

Tate claims his case can be stacked three pallets high. According to the company's marketing report on the new case, its double strength corners allow it to be stacked as high as a full depth case.

The big advantage of a medium depth case, according to Tate and the report, is that more can be loaded onto a truck. Also, less storage space is needed.

Scepter Manufacturing Co. makes a six-cell, full-depth case. A spokesman for Scepter says the trend is away from the base cup style 2-L PET toward the one-piece bottle. This, he says, signals a need for a full-depth case because it absorbs the weight that usually falls on the base cup.

Tedruith also manufactures a six-cell, full-depth plastic case, and a spokesman said that it can be stacked three pallets high with no problems.

North American Can Co. offers a medium-depth, six-cell case which is open on all four sides to allow for clear viewing of the label. Jim

Hawley, the president, says sales have "really taken off." They have had it on the market for about 10 months.

International Container Systems in Tampa, FL, has just introduced something unique — their Port-A-Pet. It measures just several inches high and holds six 2-L PETs. It lists for \$1.47, a price substantially lower than other cases, it says.

"It's very lightweight," says Dick Rossetti, director of marketing and sales for ICS. "Four empty Port-A-Pets stack as high as one empty full depth case, which means many more can be loaded onto a truck when picking them up."

Rossetti says the base accommodates all types of closures. "We have test stacked the Port-A-Pet in a warehouse three pallets high without any leaning or damage to the bottles. However, our recommendation for maximum stability when stacking is two pallets."

Two rings in the center of each Port-A-Pet allow an ICS promotional display for supermarket advertising.

scepticism

However, not everyone is sure the returnable plastic case will eventually sweep the country.

William P. Young Sr., president of the William P. Young Co., a manufacturers' rep based in Detroit, says, "I don't see a big trend. It won't work in the big metro areas. It's only big right now in closed route areas, where the people are sure to get the cases back. Also, there's a good chance competitors will use the cases."

Young sees a big initial expense that many bottlers see as too risky. "If the bottler loses one in 10, that really cuts into his profits. Also, more warehouse space will be needed."

"We feel the payback period is around three years. We can do better things with our money," says Gaylord Perry, manager of corporate purchasing for Beverage Management, Inc. in Columbus, OH. "The cost is prohibitive. We must then go into bulk. Case washers must be added — these cases pick up a lot of dirt." Perry sees no move by the company to the plastic case in the near future.

Plastic cases can save millions, new study says

Bottlers with annual sales of 5 million cases can save \$17 million over an eight-year period by using returnable plastic cases instead of corrugated cartons for 2-L PET (polyethylene terephthalate) bottles, according to a study conducted by Tedruth Plastics Corp.

The study projects that ten sizes of bottling operations, with sales ranging from 50,000 to 5 million cases per year, would have to spend annually over an eight-year period for returnable cases. Also taken into account were initial investments for a case washer (\$20,000,

by Tedruth's estimate), and an automatic depalletizer (\$50,250). In addition, the study assumed that the hypothetical bottlers would have to accommodate a 10% increase in sales every year.

A per-year cost for one-way corrugated cartons was estimated in

Returnable plastic cases vs. corrugated cases: costs and savings

Year	Annual sales		
	500 thousand	1 million	5 million
1. Plastic	248,360	501,220	2,236,100
Corrugated	150,000	300,000	1,550,000
Savings	(134,360)	(201,220)	(736,100)
2. Plastic	194,114	320,727	1,333,635
Corrugated	181,500	363,000	1,815,000
Savings	(12,614)	42,273	481,365
3. Plastic	80,530	135,830	679,151
Corrugated	219,615	439,230	2,196,150
Savings	139,085	303,400	1,516,999
4. Plastic	77,395	154,702	773,511
Corrugated	265,734	531,069	2,655,345
Savings	188,339	376,367	1,881,834
5. Plastic	88,377	176,556	882,855
Corrugated	321,787	642,696	3,213,919
Savings	233,410	466,140	2,331,069
6. Plastic	101,089	201,916	1,009,859
Corrugated	389,298	777,630	3,889,599
Savings	288,209	575,714	2,879,740
7. Plastic	115,903	231,460	1,157,710
Corrugated	471,884	942,172	4,712,456
Savings	355,981	710,712	3,554,746
8. Plastic	133,211	265,920	1,330,097
Corrugated	570,960	1,139,580	5,700,240
Savings	437,749	873,660	4,370,143
Savings, 8 years	\$1,642,777	\$3,348,266	\$17,015,891
Total case sales	5,723,000	11,437,000	57,181,000
Savings per case	\$.287	\$.293	\$.298
Reprocess value*	\$171,690	\$343,100	\$1,715,430
Gross savings, 8 years	\$1,814,467	\$3,691,376	\$18,731,321

*Reprocess value was not included in the per case savings figures.
Source: Tedruth Plastics Corp.



the same manner and then compared to the figures for plastic cases. The data show that in the first year, because of the higher initial cost of plastic cases, a bottler with a sales total of 500,000 cases would have to spend \$134,000 more for plastic returnables than he would if he stuck with corrugated cartons. A bottler with sales of 1 million cases a year would spend over \$200,000 more, while one with a sales output of 5 million cases for the year would have an additional expenditure of over \$730,000 more.

However, the figures indicate, by the second year the million-case-a-year bottler is saving \$42,273 by using plastic cases instead of corrugated, while the 5 million-case-a-year operation has realized a savings of \$481,365. The 500,000-case-a-year bottler is still spending more on plastic cases than he would if he used corrugated, but the difference in cost has dwindled to \$12,614.

By the third year, the conversion to plastic cases has yielded significant savings for all three bottlers. The 500,000-case-a-year operation

has trimmed costs by \$139,000, while the 5-million-case-a-year bottler has banked over \$1 million.

Every year thereafter, the statistics show, every size of bottling operation benefits greatly from the use of returnable plastic cases. By the end of the eighth year, the bottler who began the test period with an annual sales total of 500,000 cases has avoided spending \$1.6 million, the million-case-a-year plant has saved \$3.3 million, and the 5-million-case-a-year operation has realized a \$17,015,891 return, in the form of savings, on its investment.

low estimates

As significant as those figures are, they are not, by Cities Service Co.'s own admission, all that accurate. "In order to provide the most conservative estimate of plastic case savings," says a company spokesperson, one of the authors of the study, "we used unfavorable cost figures for the plastic, as opposed to far more favorable estimates for corrugated." The result, he told **Beverage Industry**, is that

the actual savings are "substantially more" than those reported in the study.

For example, he says, the use of plastic cases would eliminate the need for a bottle washer. Yet that savings was not taken into consideration when determining the cost advantage of plastic.

In addition, he adds, "we reflected in the study an annual increase in the cost of corrugated cases of 10%. That is very low. Some bottlers have told me the increases may be 50%."

Also omitted from the final calculations is the money bottlers routinely lay out to pay for the 3-5% of corrugated cases that are damaged before they're even used.

He also points out that there are certain advantages of returnable plastic cases that cannot easily be translated into dollar figures. For instance, he says, the plastic cases can be stacked at least three cases high, while corrugated cartons, especially in plants in humid areas, can only be arranged in two layers and this means more warehouse space is tied up.

.5-L PET may signal packaging shift

With the emergence of the .5-L PET (polyethylene terephthalate) bottle as a viable beverage container, the soft drink industry may be on the verge of a dramatic packaging shift that could result in as much as one-fourth of total packaged sales volume being sold in plastic by 1983.

Considering that the .5-L PET container was introduced only three months ago, that may sound like an astounding prediction. But consider these facts:

In 1977, when 2-L PET bottles made their debut, plastic held such a minute portion of the primary packaging market that the NSDA did not even break out figures for that container in its annual sales report. The largest package it presented statistics for was the 64 oz. bottle which was almost exclusively a one-way glass container.

One year later, with a 369% increase in the use of plastic bottles, the NSDA replaced the "64 oz." category with the designation "2-L," changing the whole packaging picture. The large size PET bottle could no longer be ignored. By 1979, it already had a 15% share of total beverage packaging, and had all but driven the 64 oz. glass bottle into obscurity. The consumer had clearly demonstrated that; when it came to large purchases, s/he liked his soft drinks packaged in plastic.

At the same time, s/he was showing a growing preference for a one-way, single-service (16-16.9 oz.) bottle. The warm reception for this glass package prompted analysts like Arthur Stupay of Prescott, Ball & Turben to dub it the hottest package ever.

As of 1979, the NSDA was reporting that single-service containers made up $\frac{1}{3}$ of the 10% of beverage packaging accounted for by nonreturnable glass. Shipments of that size glass container through the first 10 months of 1980 were up more than 50% over the previous year.

Consumers may have demonstrated that plastic was the pack-



Savannah bottler's Coke products debuted in May.

aging material they preferred, but the package size they wanted was in the 16-16.9 oz. range.

enter the .5-L

Along came the NSDA show in Chicago, and the unexpected unveiling of the .5-L PET.

Skeptics had always discounted the chances a small-sized PET container would have against glass and metal. The small plastic bottles don't have the carbonation retention a bottler needs, they said. Indeed, that has been a drawback. A spokesman from Amoco Container Corp. told **Beverage Industry** that the present generation of .5-L PET bottles has a shelf-life of about 12 weeks; others say it may be considerably shorter than that.

But as the test marketing of Continental's contoured .5-L Coke container in Newark, OH enters its third month, Coca-Cola USA is maintaining that carbonation retention has not been a problem.

"It doesn't have the carbonation retention of the 2-L size," a Coke USA spokesman told **BI**, "but it is stable for at least eight weeks on

the store shelf," which meets Coke's standard for its packages. Industry sources say the .5-L should perform equally well with other brands.

Other observers have claimed that the .5-L PET will not be cost competitive with single-service glass. "The cost may keep it from catching on," says Ed Schollmeyer, a packaging analyst with Paine Webber. "I think it will kill the can — the can is more expensive. But it's not going to hurt glass because the Plasti-Shield bottle costs less."

The key, says Schollmeyer, is to come up with blowmolding equipment that can produce .5-L PETs "fast enough to make this package cost effective and cost-efficient." Both Cincinnati Milacron Co. and Nissei America, Inc. say they have done just that.

Cincinnati Milacron announced at the NSDA show that it is offering its RHB VII blowmolder for the production of .5-L PETs at the rate of 135 a minute. A spokesman told **BI** that the firm has already placed a number of units with bottle suppliers.

Nissei's new unit is the ASB 650-

10F, which produces 30 free-standing, base-cupless bottles per minute. A sales representative told **BI** that the completely integrated system, including the molds, sells for \$348,000. The firm already has orders from several bottle suppliers, as well as from several bottlers who want to self-manufacture the containers.

In addition, tpT Machinery Corp. recently announced that it will begin assembling .5-L PET blowmolders in Erlanger, KY.

availability

How soon can soft drink producers expect commercial quantities of .5-L PETs to be available?

There is no clear cut answer.

Several machinery manufacturers have told **Beverage Industry** that their equipment was already being used by at least six major firms to manufacture the .5-L units. Two of the bottle suppliers denied it, and several of the others say they are nowhere near the test market stage.

Likewise, **BI** has heard from a variety of reliable sources that versions of the .5-L PET are, or already have been, test marketed in at least five sites, including a major city on the East Coast. Yet the only sites that have been confirmed to be test markets are Newark and Zanesville, OH. In both small towns, the local bottler is running a contoured Coke container under the auspices of Coke USA.

If availability is limited, why is the .5-L already being tested? David Katz, Coke USA's director of packaging, is as close-lipped on the supply situation as the bottle suppliers themselves. He stresses that the Newark and Zanesville tests are sustained evaluations of the container, not a reflection of its availability.

One reason for the reticence on the part of bottle suppliers may be the fact that they don't have the technologically advanced equipment — or at least not enough of it — to produce the .5-Ls at a price competitive with glass. Mass production is several steps away.

Lower production means higher costs per package, but there are several other factors that could act

to keep .5-L PET prices low, even if the container is not extremely profitable for the producer. For one thing, there is a virtual price war going on among the firms who market PET resin. The proliferation of suppliers has almost glutted the marketplace, undermining any attempt to raise raw PET prices to realistic levels.

At the same time, plastic bottle makers have expanded their capacity to the point where there is an excess supply. Many pinned their hopes to the 1-L PET, which has not matched the success of its 2-L brother. With such a high overhead, they would probably rather run their modified machinery at a speed that means a very small profit margin — than not run it at all.

consumer acceptance

!

If indeed the technological problems involved in producing the .5-L PET have been solved — and a number of bottle suppliers evidently have wagered large sums of money that they have been — then the last hurdle the .5-L PET faces in catching on in a big way is acceptance by the bottler and, more importantly, the consumer.

The big question about consumer acceptance observers have repeatedly raised is whether they'll drop their preference for the can or the single-service glass bottle in favor of the .5-L PET.

As H. Randall Litten, vice president-plastic products division of Owens-Illinois, pointed out to the audience at the plastic bottle seminar held in New York last fall, "consumers have no serious issue with the durability, weight or handling ease of 12 oz. cans and 16 oz. bottles."

Yet, here again, the historical facts suggest that they may indeed make the switch, and in a big way. As the spokesman from Coke pointed out, "consumers have shown their preference for three things. They've shown a preference for a convenience package, for a 16 oz. bottle, and for a plastic container."

Even the most skeptical observer admits that the small-sized PET container is lighter, safer and easier

to dispose of than glass. Besides being convenient and an attractive size, it is also a new type of package, and for that reason alone it may induce enough persons to give it a try until a following can be built up.

bottler acceptance

The other factor involved is acceptance by the bottler. As Litten commented in New York that day, "we are going to be in an economic battle with two package materials that have their highest production speeds and efficiencies in the 12 and 16 oz. categories. These are also packages which bottlers have learned to fill at high speeds." Those factors could be strong deterrents to the bottler.

Yet the situation is no different from the first few months after the 2-L PET was introduced. One equipment supplier told **BI** that, because of skepticism about how the bottle would run on the line, initially one a few bottlers were willing to take a chance on the large size plastic container. But the consumer demand was such that now "virtually everyone has gotten into it."

However, there are certain technical problems that have to be overcome. According to Michael Peronek, manager-operations for FCI, Inc., the lightness of the .5-L PET creates a problem when it's run on a high-speed line. "With a high speed line, you are going to have to have a new conveyor system. You will have to design parts that will hold the bottle down," he notes.

Here again, history has set a precedent. When 2-L PETs were introduced, first production runs were a nightmare. Bottlers had to station extra personnel on the line to literally hold the containers on the conveyors. It was a new package, and a whole new packaging material, but parts suppliers and OEMs solved the problems involved in running the bottles on existing glass lines.

Already it appears that change parts can't supply all of the answers to the myriad problems of handling the smaller PETs. A drastic change has to take place in what has been

traditional production methods.

What will likely evolve is a line that resembles a glass filling/packaging line downstream from the filler, yet is more compact and has lighterweight components. The filled container, although lighter than glass, is close enough in weight to be handled in a similar manner.

Downstream, however, there are still problems. Leading line designers can foresee the day when the smaller PETs are handled in a manner similar to closures. In other words, they'll be handled *en masse* (perhaps in a dump bin) and orientated and cleaned as they're fed into the filler.

(The infed concept would be similar to that already in place in many other industries: shampoos, edible oils, liquid waxes, etc. Filling speeds of 300 containers per minute are already common.

new equipment

The need to handle plastic bottles differently is reflected in the new equipment from a number of suppliers. I & H Conveying & Machine Co., for example, introduced a new in-line rinser at this year's NSDA show. The unit has belts which power drive the container through the twist/rinse/drain cycle.

Many new conveyor options utilizing mesh, plastic interlocking sections and rollers are also on the market.

Such new lines — when they come about — should be less expensive to install and operate. Depalletizers, uncasers and infed conveyors will likely be eliminated. Downstream units could also be made lighter and less expensive than comparable glass lines.

This cost advantage would also encourage the bottler to shift into .5-L as soon as sufficient container supply can be assured.

Other cost savings — particularly in secondary and tertiary packaging — could also increase its appeal.

The need for equipment specifically designed to handle the .5-L PET does not prevent Peronek from saying "it [the new bottle] will catch on. The bugs will be worked out in six months."

The prediction that the new

Even the most skeptical observer admits that the small-sized PET container is lighter, safer and easier to dispose of than glass.

small-sized PET container will become a significant package was echoed by virtually every other supplier **BI** contacted in assessing the situation. As the spokesman from Nissei said, "With the orders we've received from bottle suppliers and bottlers in the last month, it has to go over big. It's happening right now."

the 1-L PET

The spokesmen were less sanguine about the prospects for the 1-L PET. "That's an important package," said the spokesman from Amoco, "but it's not a big growth segment at the present time." He, like a number of other observers, noted that bottlers are not that anxious to carry a large number of packages. Most look at the 1-L PET as one they can do without. "There are just too many packages on the store shelves today," the spokesman said.

Another observer mentioned that the 1-L costs almost the same as a 2-L PET, yet gives the bottler only half the capacity. On a cost per use basis, he said, the bottler is better off using the bigger bottle.

While the 1-L PET may not be contributing to a significant degree, plastic is moving in on ground previously the exclusive domain of glass and metal packaging. But can and glass bottle manufacturers are not sitting idly by. Rather, they are arming themselves with an arsenal of new manufacturing techniques and marketing programs designed to promote their strongest products.

Ten glass manufacturers that belong to the Glass Packaging Institute, for example, recently joined together to form the Glass Vending Assn., an organization that is spending millions of dollars to promote the use of 10 and 16 oz. pre-labeled bottles in vending machines. Bottlers are given a 4 cent credit for every case of bottles they buy. The money can then be used

either to adjust existing vending equipment to handle the bottles, or towards the purchase of completely new units.

Several types of bottles, including the Plasti-Shield, the Ultra Performer and containers labeled with paper stocks or paper-film laminates, are being offered at a variety of prices. One of the newest containers offered is a bottle pre-labeled with the Cellu-Lam shoulder-to-base label from Cellu-Craft Inc., New Hyde Park, NY. The bottle reportedly offers a 10 cent per case savings over Plasti-Shield containers.

The package — which was chosen in consumer preference tests by a 2.5 to 1 margin — will shortly be introduced by four bottle suppliers, a spokesman from Cellu-Craft told **BI**.

The steady rise in the use of PET bottles has fostered the introduction of several new paper and paper/film laminated labels for those containers as well. The key to their success, industry sources say, is coming up with the equipment to apply them accurately yet efficiently.

One of the equipment suppliers doing a lot of work in that area is B & H Mfg., Ceres, CA. Building on its experience with hot-melt labelers, which are handling the lion's share of 2-L PETs on the market today, the firm is reportedly working on a new system that will apply a completely new labeling material.

Associpak Inc., Buffalo, NY, debuted its roll-fed Magnawrap labeling system at the NSDA show in Chicago. The six-station unit applies laminated wraparound or spot labels to 2-L PET bottles at 300 bpm with a hot melt that feeds only upon demand. Glass containers can also be handled.

It is entirely possible, observers say, that the .5-L PET will be offered in a nonlabeled version. The contoured Coke container presently being test-marketed in Newark is



Pepsi-Cola Bottling Co. of Hickory, NC, was the first Pepsi bottler to offer the .5-L PET package, debuting in March 1981. The bottler's initial marketing efforts of the .5-L plastic bottle included six-packs, cold singles and vending.

pre-labeled with a Galbreth heat-shrunk film, but suppliers — primarily secondary packaging manufacturers — have mentioned that franchise firms would likely accept an unlabeled version if it met some standard criteria.

secondary packaging

The changes that will almost surely take place in PET labeling will likely be paralleled in secondary packaging. A number of innovations have already been unveiled, particularly in the area of multiple packages for 2-L bottles.

"This year, we saw a lot of heavy emphasis on 2-L multipacks," Maurice Richardson, general manager-soft drinks for Mead Packaging, told **BI** in a telephone interview during the last few days of 1980. He added that the second generation of multipacks will likely be used "heavily" throughout 1981, giving them "a fairly significant portion of the [secondary packaging] market."

Mead Packaging offered its first multipack for PETs, the Cluster-Clip, in 1978. The paperboard clip goes over the retaining neck rings of two 2-L PETs. Since a minimum of paperboard is used, the Clip is much more economical than a full wrap would be.

The Cluster-Clip was recently introduced with a front flap that extends down to the shoulders of a 2-L PET. Dubbed the Showdown

Clip, the new carrier offers more space for graphics.

Mead's latest multipack is the Cluster-Sleeve; also a package that evolved from the Cluster-Clip. As with the Clip, the bottles are held together at the neck. But the Cluster-Sleeve has the added feature of a shoulder-to-base sleeve that wraps fully around both 2-L containers, providing ample room for graphics. The firm has yet to announce its first customer for the package, but Richardson described bottlers' reaction to it at this year's NSDA show as "extremely enthusiastic." Mead will ship the first unit for applying the Cluster-Sleeve some time next month.

Another sleeve-type carrier is being marketed by Manville Forest Products Corp. (formerly Olin-kraft). The Top Hand II extends down over the shoulders of two 2-L PETs, providing large billboard panels for brand identification and promotional messages. According to a company spokesman, equipment for applying the carrier is being developed.

For the 1-L PET, several clips are available for either a 1 x 2 or a 1 x 3 configuration. Two-, four-, and six-pack baskets are also available as are several stretch wrap packages.

Bottlers have a number of 1- and 2-L PET multipacks to choose from, and the choice will continue to grow wider as secondary packaging suppliers fine tune their prod-

ucts to find a more effective, cost-efficient package.

Mead, for example, is looking at a number of paperboard and film options. "One thing which can be used is the Top Pack, which we introduced two years ago at the Atlantic City convention," explains Richardson. "It didn't work on glass, but it will on plastic because of the retaining ring on the PET bottles."

The firm has also experimented with a number of modified paperboard wraps, "including some rather skimpy models. I think you can make a very strong argument for a wrap that has a good billboard surface," Richardson adds.

Film, used in conjunction with plastic clips or collars, will likely give paperboard some competition for the .5-L PET multipackaging market. One of the difficulties film packaging manufacturers will have to overcome, however, is how to wrap film around a lightweight, unstable container. Initial testing suggests that a paper under- or over-wrap may be necessary to control the containers while they're being grouped, wrapped and passed into the shrink tunnel.

One firm doing a lot of work in the area of .5-L PET secondary packaging is the Hi-Cone Div. of Illinois Tool Works. The firm could quite possibly come up with the means to shrink wrap the bottles in a 12-pack.

12-pack returnable 16 oz. being tested in IL

When the number one package in your market is also the most promoted package in the market, how do you get consumers to increase their purchases?

One way would be to increase the multiple. It's worked before: witness the success of the 12-can package. But the total weight of 12 cans is a lot less than say, 12 16 oz. returnables. Will the consumer buy it?

That's just what Pepsi General Bottlers, headquartered here, intends to find out. The firm recently started testing a 12-pack of 16 oz. returnables in its Kankakee, IL, market area.

The new package (which may be an industry first) is a direct attempt to increase volume by attempting to get the consumer to trade up to the higher multiple.

According to Thomas Govert,

marketing manager for the firm, the test market was entirely converted from 8s to 12s for the test. Additionally, "this location afforded isolation with no overlapping from other major markets in the area."

Among concerns is the weight of the multiple. Filled, containers and carriers weigh 26 lbs. (by comparison, the eight-pack weighs approximately 18 lbs., a six-pack of 32 oz. returnables, weighs about 21 lbs.).

To make it possible to hold that much weight, Mead Packaging, Atlanta, created the Circuitainer. The square basket has a six-ply handle and is reinforced by gluing full depth dividers to end and side panels. Circuitainers are shipped flat and erected on special equipment at the bottler's plant. Once they've been erected, they stay that way throughout the life cycle of the



carrier.

According to Govert, the square baskets are easily stacked and lend themselves readily to free standing displays. "The billboard is also larger than anything else in the marketplace," he commented.

If his test is successful, the new package will begin being utilized in other parts of his market. However, before any decisions are made, he stressed that the package would be given a full evaluation.

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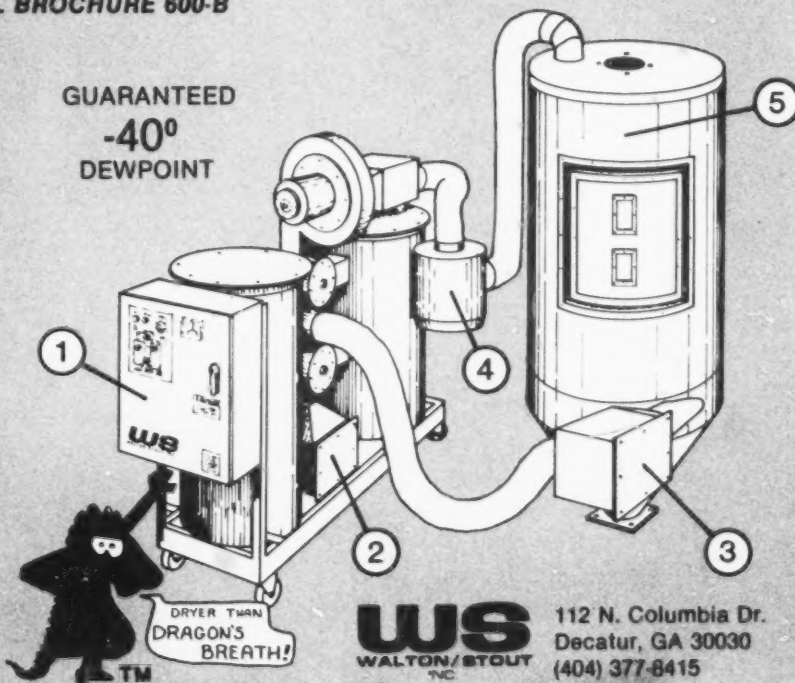
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Computer review: from accounting to warehousing

Following is a review of some of the latest developments in computer hardware and software designed to meet the needs of the beverage industry.

Honeywell Inc.'s Level 64 computer is the heart of a data processing network being set up by Beverage Management, Inc.

BMI is linking the headquarters-based computer with Honeywell Level 6 small systems at each of its eight bottling plants in three states.

"When this network is completed we'll be able to cut administrative costs while building a distributed financial, production and reporting system for each bottling plant," Bob Hall, director of management information systems for BMI, said. "Sales and expense figures for approximately 700 drivers and salespeople for about 75 products and package sizes are entered and processed by the free-standing Level 6 systems and used to generate daily warehouse reports. This data will be batched via communications terminals into a database at the headquarters computer for consolidated analysis and reporting."

The Level 64's database will enable BMI to assess profitability by several criteria such as product, package, size and some 40,000 soft drink accounts. In addition, BMI will be able to evaluate the distribution of products by geographic market segments.

The system's software, developed by BMI, updates the company's sales history database in addition to warehouse, employee, product and general ledger master files. After data entry, the validation and processing of all sales ticket information is done automatically. In addition, the BMI program monitors truck load-out and load-in quantities as well as driver cash/expense/adjustment activity.

A typical Level 6 configuration consists of a Model 43 central processor with 192K words of main memory, a 300 lpm printer, 13 mb of both fixed and removable disc,

four Honeywell visual display terminals, one synchronous communications line and one dial-up 4800-bps modem. The Level 64 has 512 kb of main memory, three nine-track tape drives, a 900-lpm printer, a 300-cpm card reader and five 100 mb disc drives.

Display Data Corp. is offering a new system designed specifically for the soft drink distributor.

The in*sight Soft Drink Distribution System is a complete, ready-to-use in-house computer system, the company says. Designed to be installed and operated at the plant/distribution point by non-EDP level personnel, the in*sight systems addresses functions such as full route settlement, inventory control, discount & promotion control, accounts receivable control, sales/merchandising statistical analysis, forecasting & inventory planning and full service/rental vending machine accounting.

The system can also communicate in a network environment. Incorporated in the system is a method of settlement, Quick Check, that provides real-time, one-the-spot settlement of all cash and inventory.

The basic in*sight system consists of a 64K CPU, CRT terminal, 10 M.B. Disk, 150 lpm printer, communication's modem and complete soft drink route accounting programs. Prices range from \$35,000 to beyond \$100,000 for large on-line systems, with a typical price of about \$45,000. Lease terms are available.

Future plans for additional applications include vehicle/equipment maintenance, production control and warehouse management.

SHA Computers, Inc.'s SHA-re system enables the soft drink bottler to know on a daily basis at the start of his normal bottling day what happened to his business the previous day, the company says.

Billing can be done the day after a cycle ends. The system can be

used with off-truck, pre-sell or tel-sell and has been designed to permit and to facilitate upgrading of soft drink delivery systems.

As part of the general settlement process, which normally takes about 20 minutes, SHA-re updates and posts each day's transactions to the general ledger, accounts receivables, and sales statistics.

Systems are assembled and pre-run before installation.

Every new computer specialist at **Tudor Systems** works on a route truck and does whatever else is necessary to understand how a wholesaler operates, the company says.

Tudor, a computer software specialist that caters to the beverage industry, offers low cost lifetime improvement service and a monthly service fee includes program improvement as well as maintenance costs.

The company's BIMAS2 software package provides route accounting, inventory control, forecasting, order planning and package distribution capabilities.

Tudor is a representative of Texas Instruments.

Data Consultants, Inc.'s Automated Softdrink System provides daily processing of sales, promotional deals, pre-printed tickets in stop number order, route book processing, driver sales contest, automatic route/driver settlement, daily reports, automatic commission computation and reports, tax calculation at time of sale, monthly beverage tax report, automatic monthly rental billing, generation of full service commission checks through cash disbursements subsystem, customer sales history retention for 13 months, pricing schedules, immediate inventory receipts and adjustment posting, weighted moving average costing routine, comparative book and physical quantity analysis, inventory reports, automatic transfers to accounts receivable sales journal and invoice adjustments journal,

and a full accounts receivable Sub-System including manual invoice, invoice adjustment, cash receipts posting, automatic reconciliation, end-of-month statements, delinquency reports, aged detail and summary trial balances, and an on-line inquiry by either customer or A/R account.

MSI Data Corp.'s Route Manager system combines a data entry terminal with a heavy-duty battery-operated printer and an optical interface.

A key aspect of the system is user-programmability. This means that program changes are easily accomplished and that other data collection functions besides preselling and route accounting can be undertaken.

The TM700 Terminal Multiplexer communication device enables Route Manager terminals to directly contact the system's central data processing system.

The **Norand Corp.**'s Route Commander is a portable system consisting of a 101XL computer unit combined in a suitcase carrier with a full 26-character alphanumeric printer.

The system can be programmed. Out on routes, drivers/salesmen enter orders and the Route Commander keeps automatic track of inventory and prints sales tickets. It also does route accounting, keeps track of cash, charge sales, returns, credits and even breakage.

The Route Commander also keeps track of specials, tolls, mileage and parking.

Catalyst USA, Inc. takes a turnkey approach to computerizing warehouse operations.

Catalyst offers everything from development of management operating strategies to warehouse layout, from design of computer software to selection and installation of material handling equipment.

As part of the company's automatic storage and retrieval system, the computer is programmed to store all the items in the inventory in the most space-efficient manner possible. The user always knows exactly how many stockkeeping units are on hand and where they

are stored, the company says, adding that the system eliminates loss of inventory. Records are kept of all transactions while up-to-the-minute reports on inventory status are also available.

Storage locations are selected on the basis of demand and the system can be programmed for accumulation of orders and combining of stores and retrieves.

Other features are a cycle count module, readable label and bar codes, real time management control, a multi-level security system, warehouse profile analysis and simulation and backup control.

Catalyst also takes a turnkey approach to computerization of shipping control systems.

Whether a shopping operation uses UPS, USPS, LTL or any other special service, Catalyst provides computer systems complementary hardware to assure total control throughout the shipping process.

Capabilities include automatic parcel processing, order consolidation and generation of both mandatory and optional paperwork and reports.

Compucon, Inc.'s CAPE (computer assisted packaging evaluation) is three computer programs which solve packaging problems from the inside out.

One program electronically jiggles arrangements of packages in a case around to discover the most efficient combination.

A second program chooses a package size and case arrangement which most reduces materials costs.

The third program evaluates the stacking strength, board grade and pallet arrangement of shipping cases. After studying the variables, CAPE chooses the best approaches in each area.

Handling, freight and inventory costs can be reduced substantially, the company says.

Hunkar Laboratories Inc. of Cincinnati is offering a new computer-assisted manufacturing system, the Hunkar IM3, designed specifically for the plastics molding shop and its ancillary facilities.

The system's five main functions are process monitoring, automatic

quality control, production management, downtime accounting and centralized data management.

Because each IM3 is its own, self-contained "stand-alone" data processor, central system downtime doesn't interfere with the ongoing data gathering process. Yet the IM3 provides for a total information base that allows for monitoring of the entire plant from inventory to work in process, from packaging to finished goods, all on a real-time basis. The data collected by the individual IM3 terminals is periodically gathered by the central plant computer for plant reporting and scheduling, and to provide the security inherent within a redundant system.

The IM3 terminals require only simple numeric answers to questions written to be understood and acted upon by floor personnel. They also operate as a remote CRT terminal reporting information relayed by the central computer.

Barrett Electronics Corp. has introduced a microcomputer system for complete remote control of Barrett Guide-O-Matic and UNICAR driverless vehicles.

Called Constant System Monitoring, it incorporates an optional color graphics TV display giving management and maintenance personnel complete information on the status of all Barrett driverless vehicles in their system.

The complete CSM system is composed of three modules — a processor, guideline driver and the graphic display terminal. The processor is available with an optional link to a central computer or an interface with an AS/RS, conveyor system or other device. Linked to a master computer, the CSM system is totally automated for material handling.

The CSM graphics display terminal allows system operators to maintain peak driverless train efficiency in their plants or warehouses. System blockages or slow downs are instantly displayed on the graphics monitor to allow operators to monitor and maintain high system productivity.

Intermetrics has introduced a series of new options for its FOCUS



plantwide machine monitoring systems.

Several persons can now use the system. An exception alarm alerts any supervisor to new events. A daily production summary totalizes all three shifts data into a single consolidated report. A high-speed machine interface is provided for machines operating faster than 60 strokes per minute. An IBM Computer Interface and Serial ASCII interface are both available for transmission of production information.

All of these new options can be retrofitted to existing FOCUS systems now in operation here and abroad.

Cybercomputers, Inc., has introduced OMNI, a portable desktop package that contains all the elements necessary for a complete computer, controller and terminal. Extensive communications interfaces mean OMNI can function as a stand-alone system or as a networked desktop computer, controller or terminal.

OMNI features include a high speed processor, a disk based operating system, graphics for both CRT and printer, and a wide range of high level language capability.

The system can easily be configured to meet specifications, the company says.

Advanced Business Systems, Inc., has recently introduced a fully integrated materials requirements and inventory control system — MATRICS — for manufacturers and assemblers.

MATRICES minimizes inventory investment because it monitors demand and supply over time into the future, so that lead times can be considered, allowing "blanket" orders from customers or to vendors to be handled correctly, the company says.

Special handling is provided for outside processing, where some intermediate processes need to be sub-contracted and materials need be sent outside the main manufacturing facility.

Transaction details are posted to

the system files on a real-time basis, resulting in information that is completely current. Access to inventory, customer order, purchase order and manufacturing order status is provided by 15 different on-line inquiry screens.

Input errors are minimized by extensive input error checks and editing capabilities, the company says.

Confidential data is protected by passwords on all proprietary system functions and on confidential reports or on-line inquiries.

"While financial and accounting packages are easily available because they meet the generally standard needs of most types of business, it is hard to package operational support systems, as each company has their own unique problems and decision-making style — even within the same industry," Gerald Libby, executive vp of ABS, says. "ABS is able to customize the basic MATRICS system to meet specific needs and we believe that the modest additional cost is well worthwhile."

Capital expenditures to hit \$681.1 mil. mark in '81

The results of this year's **Beverage Industry** annual survey of expansion plans shows that the soft drink industry will collectively purchase \$281.1 million worth of new plant equipment in 1981, an 8.9% increase over the previous year.

Those figures were derived from the replies to a questionnaire sent to 1,000 soft drink plants throughout the United States.

The brewing industry has also earmarked a war chest for plant expansion this year: \$400 million, according to several industry analysts.

The brewery increase is almost 25% higher than the estimated industry expenditure for 1980. The major reason given for the record increase, according to **BI's** sources, was the fact that a number of regionals were modernizing their plants; Miller and A-B have also announced major capacity expansions.

The increase for soft drink plants is not a record. However, it does indicate that these beverage producers are optimistic about immediate and future sales. Most of the improvements take the form of replacement components rather than completely new bottling systems.

One reason for new equipment purchases is greater energy efficiency. Asked to rank the importance of six factors in making their purchasing choices, 67% of the bottlers listed this as a top priority.

The need for advanced controls and monitoring systems was the second most important factor, with 53% of the bottlers ranking that as a major consideration. In decreasing importance, the other factors were: automatic operation, greater flexibility in operation, faster speeds and more efficiency.

However, economic conditions could put a crimp in overall purchasing plans. Several questionnaires had handwritten comments indicating the expenditures were

Distribution and merchandising equipment purchases¹

(in millions of dollars)

Category	Projected '81	% change vs. '80
Truckloading equipment ²	\$3.3	37.5
Hand trucks	1.6	NC
Display racks ³	8.2	15.8
Uniforms	3.5	NC
Acc'ting & data processing	11.8	27.4
Total	28.4	21.9

¹ Does not include route vehicles, forklift trucks or vending equipment. Copyright: Beverage Industry

² Included automated in-truck equipment, ramps, etc.

January 30, 1981

³ Includes POP materials, clocks, scoreboards, signs, etc.

NC = No change from previous year

Quality control and sanitation equipment purchases

(in millions of dollars)

Category	Projected '81	% change vs. '80
Quality control equipment (for lab)	2.9	14.3
Electronic and visual inspection	3.2	23.3
Coding and marking equipment	1.7	(8.3)
Sanitation equipment and chemicals	1.01	15.7
Water treatment equipment	18.5	31.0
Total	30.17	15.2

¹ Categories and totals have been rounded

Copyright: Beverage Industry
January 30, 1981

planned only if the prime rate was at a tolerable level.

production equipment

Total expenditures in this area should total \$156.3 million, a 2% increase over the amount projected for '80. Within this category, however, there were unexpected increases in the purchase of certain pieces of equipment.

For example, boiler and heater expenditures will increase 38.9% for an annual total approaching the \$7.8 million mark. Refrigeration equipment — another area where energy efficiency is of prime con-

sideration — will increase 21.3% to \$1.9 million.

A large increase (30.9%) is also projected for the purchase of bottle and can rinsers.

Most of these units are evidently for the replacement of existing, less energy-efficient units.

The increase in bottle cleaner expenditures could not be confirmed from supplier sources. Some activity had been noted, but the trend line for this category during recent years has declined.

There are indications that very few total line installations are planned for next year. Filler expenditures, for example, are only up

Packaging and materials handling equipment

(in millions of dollars)

Category	Projected '81	% change vs. '80
Multiple packaging for bottles/cans ¹	\$4.7	19.2
Uncasers	7.6	40.0
Case packers	6.4	10.0
Depalletizers	4.2	14.3
Palletizers	7.8	(22.1)
Shrink wrappers	2.1	9.3
Labeling machines	5.2	4.2
Accumulating tables, conveyors	19.4	29.6
Forklift trucks	8.8	8.7
Total	66.2	12.2

¹ Includes plastic collars, contour packs and paper wrap units. Purchase and lease expenditures are included.

Copyright: Beverage Industry
January 30, 1981

Beverage production equipment purchases

(in millions of dollars)

Category	Projected '81	% change vs. '80
Bottle cleaners	\$43.2	9.7
Bottle and can rinsers	5.4	30.9
Bottle/can fillers	44.2	1.7
Proportioning/carbonating/cooling equipment	16.1	(22.9)
Cappers	6.7	(1.7)
Decappers	3.9	12.5
Change parts ¹	10.0	15.3
Refrigeration equipment	1.9	21.3
Can/bottle warmers	1.3	(7.8)
Post-, pre-mix equipment	3.1	(33.3)
Boilers and heaters	7.8	38.9
Syrup and sweetener mixing systems & storage equipment	6.3	(27.2)
Others ²	6.4	17.0
Total	\$156.3	2.0

¹ Includes sound/noise control devices.

² Includes case washers, other unspecified equipment.

³ Categories and totals have been rounded.

Copyright: Beverage Industry
January 30, 1981

1.7% and proportioning/carbonating/cooling equipment expenditures are projected to drop 22.9%.

Expenditures for syrup handling and pre- and post-mix equipment will also likely decline.

Uncasers are high on the shopping list of a number of bottlers. According to the survey, expenditures for these units will jump 40% to approximately \$7.6 million. With the exception of palletizer purchases, investments in every other type of packaging and materials handling equipment will likely drop.

Replacing accumulating tables and conveyors seems to be an im-

portant project for '81. Bottlers have slotted \$19.4 million, or 29.6% more than last year, for that machinery.

A 21.9% increase in expenditures for distribution and merchandising equipment purchases is also planned. Leading the category are planned purchases of truck loading equipment, which will be up 37.5%.

Accounting and data processing equipment expenditures will rise 21.9% to \$28.4 million.

The step-up in investments in quality control and sanitation equipment will also continue. A 15.2% increase (to \$30.2 million) is

projected. Water treating is high on the list in this group. The category should rebound from last year's decline with a 31% increase to \$18.5 million.

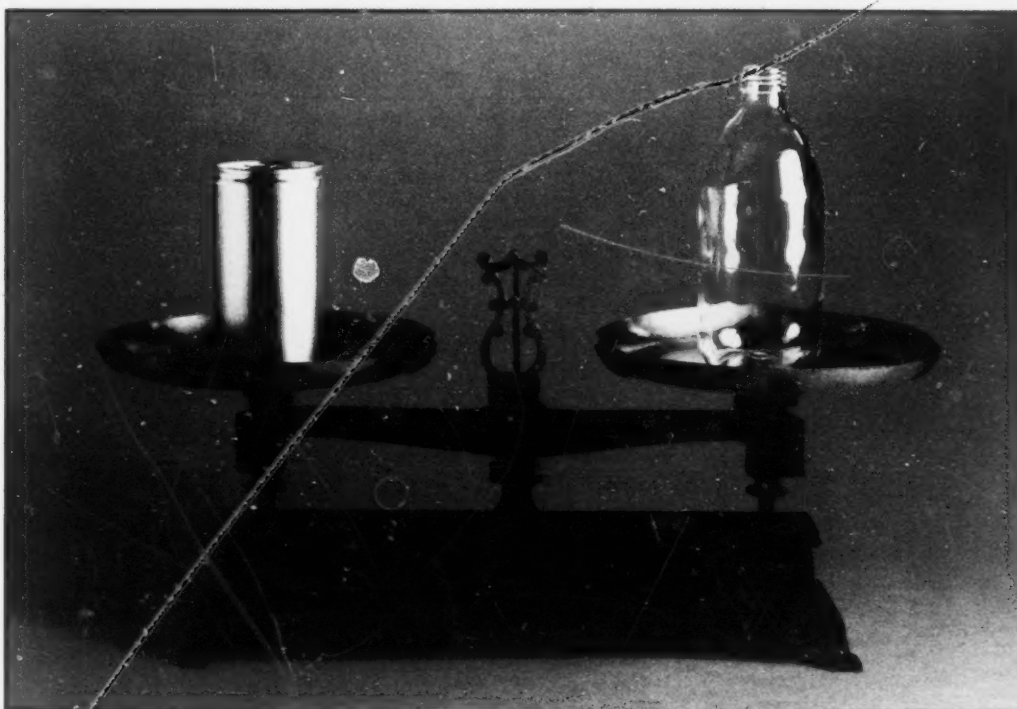
a look at '80

Cost increases in all areas continue to plague soft drink operators.

Ingredient costs were up 14% (high cost of sugar, concentrate price increases were the reasons given). Distribution costs were also up 14%.

Packaging costs were up 11% and production costs up 10%.

Bottlers weigh container choices, electronic venders



Sales of vending machines were off approximately 15% last year, according to industry sources contacted by **Beverage Industry**.

Why? It could have been that the high cost of money discouraged investment in new vendors. Or perhaps slackening parent company support for vending purchases had a negative effect.

But, more likely, potential vending purchasers were laying back waiting to see if there were any bugs left in the new generation of electronic vending equipment. Pepsi's all-electronic X-Vendor is, after all, in a test market stage of two years. And, they might have been hanging back to see if it will make sense to buy machines that only handle cans — if indeed the single service pre-labeled glass bottle is the coming vending package.

Giving a big push to the move toward pre-labeled glass has been

the Glass Vending Assn.'s program whereby bottlers earn credits for qualifying purchases of single service 10 and 16 oz. pre-labeled bottles. The credits can then be used to buy new multi-stack/depth Vending machines or retrofit kits.

In the past, without that multiple-depth stacking capability, it didn't make sense to convert machines from capacities in the range of 450 cans to 150 16 oz. bottles. Now, however, machines can handle in the neighborhood of 450 cans or 450 10 oz. pre-labeled bottles or 250 16 oz. bottles.

"Now, with the proper equipment, we're penetrating the market," Gunter Roland, vice president of the GVA, says. "We finally have the right razors to cut into the market."

"I was leery about glass in the beginning," Bob Zimmerly, manager of a retail store in San Anto-

nio, TX says. "But there hasn't been any problem of breakage."

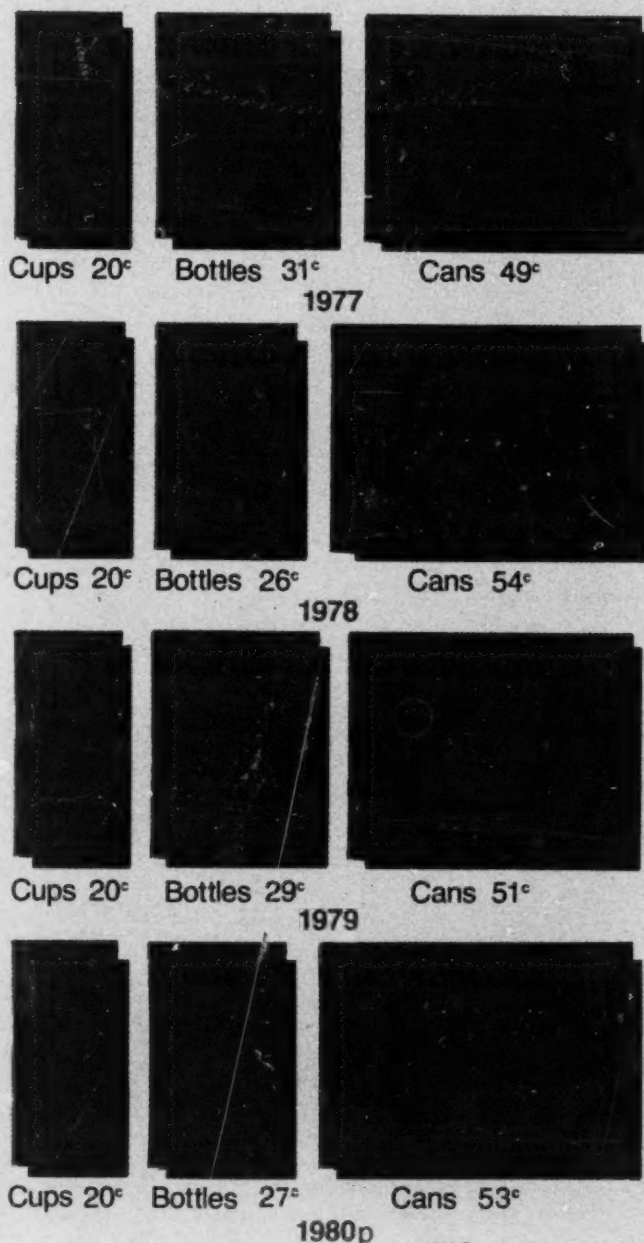
As part of a GVA test, Zimmerly had placed a 16 oz. bottle vendor next to a 12 oz. can vendor. Bottles were more profitable for him, he says, because at 45 cents a bottle, his profit margin was 22%. At 35 cents a can, his profit margin was only 15%. And in hot weather, the 16 oz. does much better than cans, he adds.

"The machine was part of a test, but I'll keep it," he stressed. "It has more than paid for itself."

Bob Mason, cold drink manager for Sacramento Coca-Cola in California, says the 10 oz. bottle came out ahead in his GVA sponsored test.

"We had a machine in a state building and found that women particularly liked the 10 oz. bottle," he says. "They found it doesn't leave a ring on their desks,

WHAT MAKES UP THE VENDING DOLLAR



1980 Beverage Industry estimate

Copyright: Beverage Industry April 10, 1981

it's not too much to drink and they would rather drink out of the neck of a bottle than a can."

GVA success

"The Glass Packaging Institute's program has been effective," says industry analyst Arthur Stupay. Analyst Ed Schollmeyer says the program may have increased glass

sales by 20%.

For instance, Stupay says, the program has probably had a great deal to do with the continuing success of Owens-Illinois' Plasti-Shield package. In 1978, he says, 1.4 million gross of Plasti-Shield were shipped. In 1979, 8.5 million gross were moved and in 1980, an impressive 22 million.

The pressure is there at the top,

being exerted downward on bottlers, to accept the 16 oz. package, Stupay says, because the larger package means that in the long run total soft drink volume will increase.

But, of course, the 16 oz. package is being price promoted, cautions Stupay. With bottlers having to pay full freight for glass, the trend could reverse itself, he adds.

Product	1973	1974	1975	1976
Soft Drinks, cups	\$595,000,000	\$ 675,000,000	\$ 693,000,000	\$ 892,000,000
no. of units	221,000	219,500	218,200	291,700
Soft Drinks, bottles	\$765,000,000	\$ 945,000,000	\$1,044,000,000	\$1,193,000,000
no. of units	865,300	854,000	834,000	814,300
Soft Drinks, cans	\$848,000,00	\$1,300,000,000	\$1,685,000,000	\$2,441,000,000
no. of units	466,000	519,000	609,000	725,000

And, looming over the can vs. bottle battle, is the prospect of the .5-L PET being introduced into the nation's vending machines. That debut could be as cataclysmic for 16 oz. glass as the introduction of the 2-L PET was for the 64 oz. glass bottle, Stupay hypothesizes.

tried and true

Meanwhile, some vending machine manufacturers continue to stake a large part of their resources on their can vendor lines.

"Eighty-five percent of the packages vended are cans," says a spokesman for one major manufacturer when asked to justify his company's new can-only vendors. (But, he hedges, a Plasti-Shield capable line is in the works, too.)

Many of the bottlers that **BI** contacted echoed similar sentiments.

Just as that manufacturer is sticking to the tried and true, others are reluctant to jump on the electronics bandwagon. That industry revolution might be generating more heat than light, they say.

"Electronics will be very costly," says the sales manager of one vending company. He pegs the added cost of a built in electronic coin mechanism and data gatherer, along with all-electronic controls, at \$400.

"What do you need all that for when for \$9 you can buy a counter to count money that goes through the machine?," he asks.

"We are infatuated with electronics, but why pay that extra money, what does a bottler need it for, and who's going to fix those things?," the sales manager continues. "With the mechanicals in the field now, we can fix just about

anything in 10 minutes."

"The general public doesn't need it [electronic vendors] and isn't ready for it," says one vending manager. "The general public doesn't read. They'll put their money in, and once the machine doesn't work, they'll kick it."

But the bottler does need an electronic vendor for better control, the same manager states. On full service machines, the need is there for accountability on changers and it can't hurt to know sales figures, he says.

"I'm not opposed to the idea of electronics, just skeptical," says a West Coast vending manager who'd rather see what he calls a step-by-step approach taken to the problem of introducing electronics to the vending field. He would prefer seeing all-electronic machines protected from the elements, located indoors only, at first.

Even so, he worries about hiring extra personnel to gather and interpret data and higher repair costs.

"Look, you'll have to replace everything in the field to return broken units to the shop — you'll need a whole set of replacements for each unit, and right there you'll be doubling your costs," he claims. On top of that, the initial costs of electronic coin mechanisms is about triple the cost of the mechanical models, he says.

The same manager is also in a small minority of those who aren't crazy about the new-look Lexan fronted vendors.

"Everything they're doing ends up adding to the bottler's costs," he complains, "Those Lexan signs cost \$100 to \$200 to replace."

The manager says it hasn't happened to him — indeed, none of

the other bottlers **BI** contacted made this complaint — but he has, he said, heard of college students stealing Lexan signs.

Because the new-look vendors are so bright at night, they seem to use up a lot of energy and are subsequently generating criticism in energy conscious towns in his state, the manager adds. He himself doesn't like the look of the new-look Coke vendor.

"You have to stand on your head to read it," he snaps.

Finally, the manager is dubious about the security of the new-look Coke vendor. He says a selection button can be popped allowing access to the coin mechanism.

the other side

Skepticism about electronics was discounted by spokespersons at La Crosse Cooler Co. Inc.

"We have the only true electronic model X-Vendor in the marketplace now," said one spokesperson. "And after initial excitement about the machines dies down in individual locations, we're estimating that sales are increasing at a 20% rate." (Models being tested in the field now vend only cans — there are plans to introduce a 16 oz. Plasti-Shield model this year.)

Durability hasn't been a problem in the heat of Dallas, nor in the cold of southern Minnesota, the company says.

"It works fine outside," says a spokesman.

In addition, with both electronic and electro-mechanical machines, there have been no security problems because of Lexan panels.

As for comparative costs of machines, the list price of the X-Ven-

dor is competitive, the spokesman claimed.

Service, he said, is not a problem because servicemen can be easily taught the basics of handling the machine's electronics.

"The technology is reliable, nothing new," says Ray Martino, vice president of marketing for Mars Money Systems, the company that makes the coin mechanism for

the La Crosse X-Vendor.

"Any normal mechanic can repair the mechanism by module interchange," Martino says.

Actually, he says, his company's electronic mechanism is more reliable than mechanical models, with service calls for mechanicals outnumbering those for all-electronic mechanisms by three to one in low-volume locations and four to one

in high volume spots.

That lower service rate, combined with corresponding shorter downtimes, helps make up for the additional cost of the mechanism, which Martino set at about twice that of a mechanical.

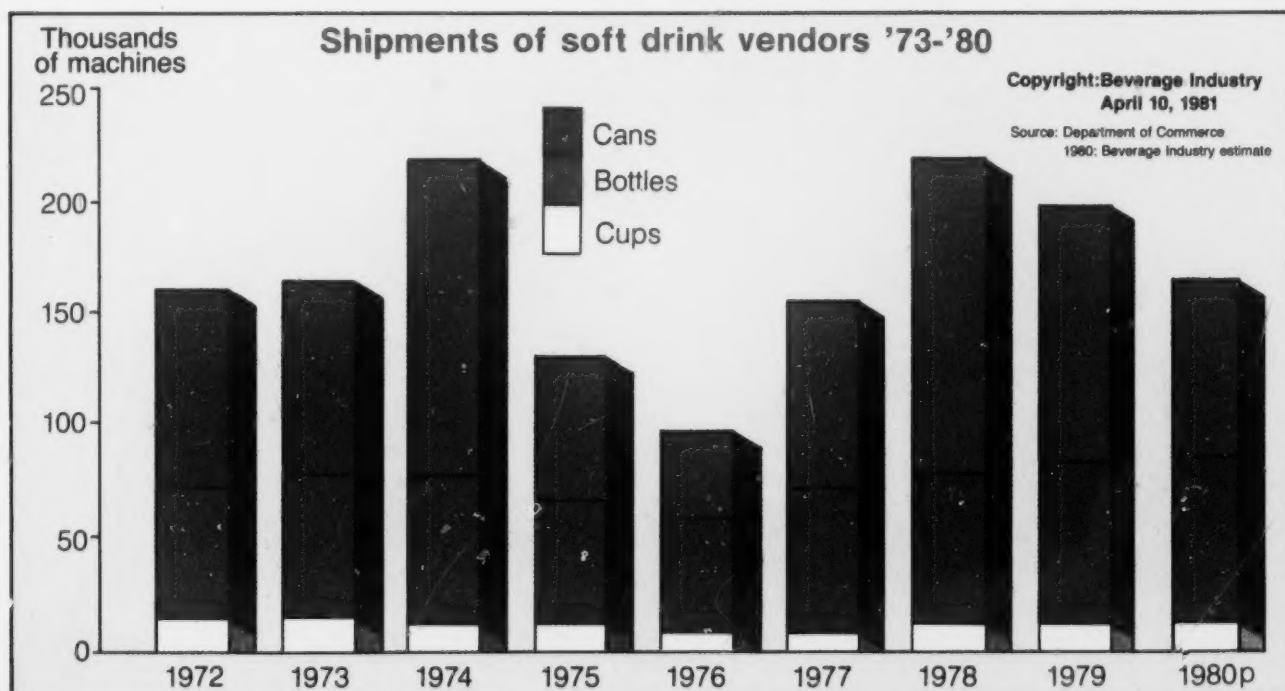
"Seventy percent of vending maintenance problems are due to faulty coin mechanisms, and the soft drink vending market is still

Analysis of gross profit and sales statistics by product, 1977-1979

	Composition of sales at retail			Average sales per machine		
	1977	1978	1979	1977	1978	1979
Cigarettes	13.1%	11.8%	12.2%	\$2,488	\$2,517	\$2,582
Candy, nuts, gum	11.6	7.5	7.9	1,697	2,004	2,478
Cold cup beverages	7.1	7.0	7.5	3,100	3,422	3,843
Hot cup beverages	16.9	11.8	11.0	3,748	4,023	4,045
Ice cream	.4	.5	.3	1,082	1,350	1,339
Milk	3.0	3.3	3.3	2,615	3,248	3,403
Sandwiches, salads, entrees	4.8	5.3	5.4	3,633	4,051	4,275
Pastry and snacks	4.7	5.7	6.6	2,210	2,654	3,015
Hot canned soups & food	1.3	1.4	1.3	1,715	1,876	1,660
Bottle and canned drinks	3.1	4.4	5.0	4,125	4,871	5,670
Misc. vending machine products	1.1	2.6	3.3	2,379	—	—
Total or averages	67.1%	61.3%	63.8%	\$2,677	\$3,029	\$3,266
Sales other than through machines	32.9	38.7	36.2			
Total sales	100.0%	100.0%	100.0%			

Source: NAMA

Copyright: Beverage Industry
April 10, 1981



Quantity and value of shipments of coin-operated vending machines, 1978-1979

	No. companies reporting 1979	Number of machines		Value (\$1,000)	
		1978	1979	1978	1979
Hot beverage: coffee — instant, freeze-dried or liquid concentrate, chocolate, tea, soup ¹	9	20,160	18,878	14,612	16,980
Coffee: Fresh brew (single cup and batch)	6	11,449	10,546	18,284	15,663
Soft drink:					
Canned beverage (refrigerated) vending machines	9	141,639	115,958	119,091	109,634
Bottle vending machines ²	6	64,372	69,527	43,018	50,698
Cup (premix and postmix)	5	11,690	12,036	26,084	30,563
Packaged milk and juice (indoor)	5	9,359	7,488	12,306	11,132
Other vending machines for beverages ³	4				
Coin-operated vending machines, total	50	675,798	543,196	346,829	357,260
Vending machines for beverages, total		258,669	234,433	233,395	234,670

Source: NAMA

Copyright Beverage Industry,
September 16, 1981

dominated by the mechanical vending mechanism," Martino says.

Martino is indeed aware of the potential problem of too much data, too little interpretation.

data gathering

Key to convincing bottlers they should invest in data gathering systems such as Mars Dataguard or Coinco's Management Information System is the development of appropriate programs, or software. The ideal printout highlights major changes at any vending locations so that adjustments can be made, Martino says, adding that Mars is striving to create programs to deliver that information. Coinco is also working on software.

Yet there are other advantages to electronic data gathering, Martino maintains. Use of a data probe eliminates middleman error and makes the gathering of sales information more efficient.

A Mars data probe, which costs approximately \$300, can record information from 60 to 100 machines, depending on the complexity of information extracted from each machine. Cost of a data box

to record that information for each machine is \$95. A data reader, the device that compiles data probe figures and feeds them into a customer's computer, is \$1,000.

Countering the charge that electronics are liable to breakdowns, Martino says the Mars Dataprobe has been designed for durability, that it may be dropped or moistened and it won't fail. The Whole new Dataguard system has been designed for durability, he points out, with data extraction from vendors accomplished through a two-way LED optical link, which allows the data box to be recessed safely inside vending machines.

Vending machines equipped with Mars electronic coin mechanisms can easily be retrofitted with a Mars Databox, just as Coinco's new Gold Box adaptors can convert existing vending machines to Coin Acceptors, Inc.'s Management Information System, featuring cash accountability.

National Rejectors Industries is introducing a line of electronic coin changers, the EL line, that features electronic coin validation. By June it promises to have available a fully electronic single-priced unit, with

other units to be introduced throughout the year. NRI is also planning to offer its own information gathering system, which will feature print out via a small, hand-held printer.

the future

A BI survey of Pepsi bottlers using the electro-mechanical X-Vendors showed that all were satisfied with the machine's performance to date. Bottlers testing the all-electronic models seemed satisfied, too.

For its part, The Coca-Cola Co., with its new-look vendor — supplied by Cavalier, Choice-Vend, Dixie Narco, Rock-Ola and Vendo — has shunted possible hassles with electronics aside, at least for the moment.

Its new vendor, now in the marketplace with both cans and bottles, utilizes the proven internal mechanics of current models in a totally redesigned exterior casing, the company says. The new exterior construction offers bottlers and retailers what it says is a more easily maintained and secure front door panel, the company claims.

But by momentarily sticking with

proven mechanics, Coke, leader in the vending sales segment, apparently hasn't dropped out of the race for technological superiority. The company is testing Smart Vendors that, when located near indoor telephone lines, can relay data to a central data processor. Machine alarms would be transmitted instantaneously.

In any case, whether Pepsi or Coke's approach to electronics prevails in the '80's, it looks like the new look is here to stay — with Dr Pepper and The Seven-Up Co. following suit.

package of the '80's

With data gathering equipment in place, though, what's going to be counted?

Bottles?

Cans?

Cups?

The Glass Vending Assn.'s credit programs has attracted so much interest — roughly one-third of all bottlers have signed up — that, the association has decided to extend the program 90 days. So glass looks like it has a shot at taking the title of vending package of the '80s.

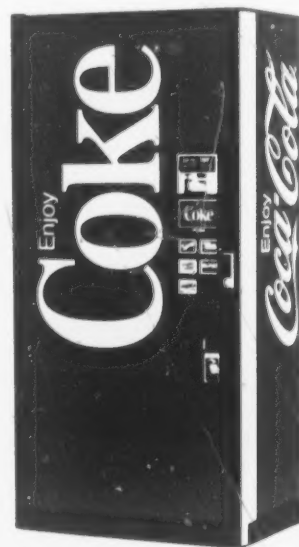
At the same time, cups seem to be making some headway, particularly when matched against cans. According to a recent American Automatic Merchandiser article, the margin on vended canned drinks is shrinking, with the most common vend price now at 40 cents.

The can, however, looks to be king, but new vendors such as the Vendo Model 672 due on the market at any moment, with triple depth capability for 10 oz. bottles as well as 12 oz. cans, and double depth capability for 16 oz. bottles, could make glass even more attractive as a vending package.

"Poly-labeled bottles have already taken a heck of a bite out of the shipped market," says a Vendo executive. Nevertheless, the company is, he says, "prepared" for plastic.

"The industry has gone through a traumatic change in look," says one industry insider.

But it looks like that trauma will look mild when compared with the convulsions the industry must certainly pass through in the areas of packaging and accounting during this decade.



The new Coke units feature a durable, high-visibility front plate with the logo applied vertically. The product selector buttons are in a vertical cluster on the right panel. Digital display tells customers price, stock conditions.

IN A RUSH TO FIND A SUPPLIER?

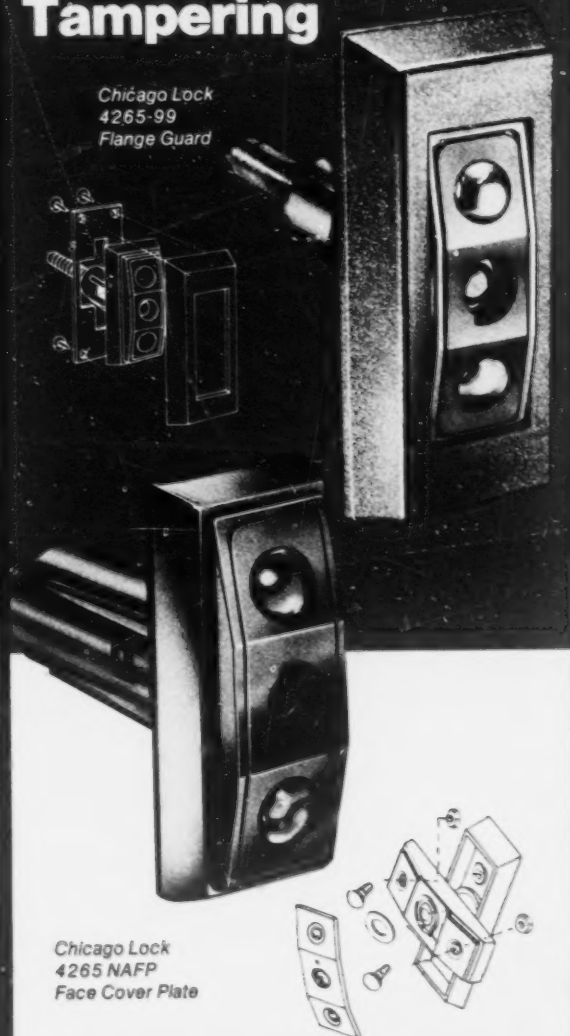


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Pros & cons of bag-in-box systems

Beverage Industry has learned that one bag-in-the-box manufacturer is close to introducing the bag-in-the-box transfer tank. However, one problem remains.

Bag-in-the box manufacturers have long since licked gas migration problems. But beyond the oxygen barrier is the pressure barrier.

Some kind of pump would seem to be the answer.

"Several pump ideas are being investigated," a source tells **BI**.

Reportedly, the potential supplier of a bag-in-the-box system for soft drinks thought at one point it had a pump that could be made for a low enough price and last long enough to make the concept economically feasible. But that pump didn't work out.

With the bag-in-the-box selling for \$1.45 a unit, as opposed to a steel tank cost of \$35, there has been what the potential manufacturer calls "Fantastic interest" in the concept.

Other bag-in-the-box manufacturers don't, however echo that enthusiasm.

"We looked at the concept four or five years ago," says one executive. "You have to remember when you're working with plastic that concentrates can absorb odor," he cautions, adding that that's one reason Coke and Pepsi use stainless steel tanks for all their concentrates.

His company tried to come up with a rigid plastic transfer tank, but it couldn't get enough return trips out of it, the executive says.

"We discarded the pump idea before that," he says. "We wanted a plastic container that would be adaptable to systems in place.

"Otherwise, the cost of modifying equipment becomes prohibitive." In other words, installing pumps at automatic fountains, no matter how inexpensive the pumps, would make the soft drink bag-in-the-box unfeasible, the executive claims.

But, says the potential manufacturer, "Every major beverage manufacturer has been looking at it."

Truck and body suppliers offering greater efficiencies

Energy concerns, government regulations and consumer demands have brought about many changes to the distribution function of the beverage industry.

Forced to alter product lines and operations, truck and body suppliers will offer beverage distributors greater efficiencies and, hence, better economies in the decade ahead.

But, although these changes run deeply across the automotive industry, many will not be obvious to the uninformed.

On the one hand, there are few totally new truck models. This is more a reflection of normal new model timing than slower truck sales.

On the other hand, a long list of refinements have already been introduced into existing models and there have been additional refinements in major truck components. It is no surprise that the lion's share of those changes will curb the amount of fuel consumed by the vehicles.

light truck changes

In light duty models — pickups and compact vans widely used in the beverage industry — the big change is the introduction of a totally redesigned line of light-duty conventional trucks from Chevrolet and GMC.

Weight reduction was the major aim of the project in which Chevrolet engineering replaced nearly all the parts in both the Chevrolet and GMC light truck lines. (GMC engineering develops the medium and heavy trucks for the two divisions. Improved smaller engines are the main feature.

Chevrolet engineers said they were careful to make only changes that would not reduce the trucks' working ability. Weight reductions range from 87 to 300 pounds, de-

pending on the model.

Among other things, the 305-cubic-inch V-8 is replacing the older 350-cubic inch V-8 light trucks from GMC and Chevrolet. In addition to basic improvements in all 305's, there is a new version that highlights the offerings for 1981. It has solid state electrical parts which improve its operation, a high compression ratio and a four-barrel carburetor.

These changes and other refinements deliver a 305-cubic-inch engine that is much lighter than the 350 V-8 and yet can still deliver 165 horsepower, only 10 horses below the rating of the larger powerplant.

new styling

Light duty conventional models from Chevy and GMC for 1981 have been extensively restyled on the exterior. While the new appearance is eye-catching, it also delivers solid benefits in reduced air drag, thus improving fuel economy.

The weight and wind drag changes, along with changes in drive axle ratios and radiators, are all aspects of the Chevrolet-GMC effort to meet a new Federal rule on fuel efficiency for 1981 model light trucks.

By meeting those requirements, Chevy-GMC, as well as Dodge and Ford, will help their customers curb their fuel bills.

Ford's light trucks were all new for the 1980 model year and the few 1981 changes are mainly refinements aimed at cutting fuel consumption. However, unlike the automobile business, where size can be slashed to produce dramatic fuel savings, improving fuel efficiency in trucks often boils down to doing a lot of little things very well.

Ford met the 1981 fuel regs by offering and promoting smaller engines, providing more efficient gearing along the drive train, offer-

ing more belted radial tires, cutting wind drag where possible, and so on.

Meanwhile, Dodge made mostly exterior design changes on its previous generation of light duty truck models, redesigning nearly all exterior parts, with the exception of the hood. The new parts give Dodge light trucks an improved appearance, along with a more streamlined exterior that cuts fuel-wasting wind drag.

There are no brand new 1981 medium truck models among domestic manufacturers. These are the trucks that do the bulk of the urban delivery work in the beverage industry. The one new heavy duty model from a U.S. producer could find a place in the beverage field. And, it really is not that new, but a specialized version of an existing truck model.

The new heavy duty model is the third generation Road Boss conventional tractor from White. It is tailored for intercity hauling of large trailers. The most visible change is a new front end which looks less cluttered and improves driver visibility. Another key change in the new Road Boss is a brand new electrical system. The new system also went into most other White truck models in September.

The Supergoose Hauler is a leading example of the specialty model trucks which are sure to be introduced in increasing numbers through 1981. The specialty of this model, spec-ed out and promoted by Swan, Inc., is pulling gooseneck trailers, a Swan specialty. The truck combines the durability of a Chevrolet-GMC medium duty chassis, big gasoline engine, Allison automatic or Clark manual transmission and a number of minor but important changes in such components as springs and wheels which fit the truck for its specialty.

Electrical improvements have

been a priority at White, which is making little refinements that head off unexpected failures and make the systems easier to service. White felt that it had made enough advances in this area in the last couple of years to declare that it had a new electrical system.

Now available in Road Boss and other White models, the new system may not get a "gee whiz" when truck users look at the visible changes, but it will get lots of praise as it cuts down on the unending succession of electrical parts failures, where collapse of a 50-cent part can often immobilize a truck worth \$20,000, or far more.

Other truck makers are improving on their electrical systems, although White appears to have made the most dramatic change.

In other developments in the truck component and features department, key changes include:

- Detroit Diesel's fuel-saving midrange 8.2-L V-8 engines have caught on and they will be available in C and LN models from Ford and in more trucks from General Motors for 1981. When they go into medium duty Cargostars from In-

ternational Harvester, as expected, they will be getting into new ground;

- Caterpillar, Cummins and Detroit Diesel have new, specialized versions of existing diesels which have been re-engineered to cut their thirst for fuel. For those who need a fuel-saving diesel that delivers big power, Mack has introduced a Super Saver 350-horsepower engine and the competition is adding similar power plants;

- There is a general trend to make more fuel-saving, thermostatically-controlled fans available in 1981 models. Ford may have a slight lead at the moment but all producers are moving in this direction;

- Every time any exterior truck part is redesigned for any reason, the designers see if they can reshape it to cut down on aerodynamic resistance or wind drag. Since, under current practice, the trend will never result in bullet-shaped, streamlined vehicles, the results aren't dramatic. Once again it is a matter of subtle refinements that pay off in important fuel savings;

- There was a major effort to

cut the deadweight out of 1981 big trucks from GMC and Chevrolet by GMC engineers. The other producers are doing much the same thing. A typical GMC move changed clutch actuation on certain models from a heavy mechanical linkage system to a lighter cable system with no loss in performance. It was not a dramatic change and no tremendous weight saving was realized, but every unneeded pound taken out of the chassis shows, at least a bit, in fuel economy.

price hike coming

New truck prices will, in all probability, go up by 10% or more through the year ahead. The increase will come in a series of smaller boosts. This is one of the buy-now concepts.

With the exception of the light truck fuel economy rule, there are no changes in federal standards that dramatically affect the trucks and their prices. It's always wise to buy before the cost of new standards run up prices and new rules load the vehicles with unfamiliar parts.

Will diesel savings cover cost?

All things considered, will the fuel savings of a diesel truck cover its higher purchase price? That is the question facing many operators in the beverage industry today.

An experienced truck salesman can deliver an accurate answer rather quickly if he has the basic figures on a specific truck application to work with. Trouble is, when it comes to presenting this type of information in a magazine article, it must be based on averages and on a certain number of assumptions.

First pointing out that those who have provided the statistics for this report are competent people trying to do an honest job, readers must however be warned at the outset, "Figures don't lie but liars can figure." There are no unrealistic assumptions here, but they can pop up in this type of comparison.

In the final analysis, each truck operator has to work out his own

diesel vs. gas comparison, making sure that all his figures are based on facts.

Working here with very sound figures from Detroit Diesel Allison Div. of General Motors and Iveco Trucks of North America, a case can be made for the conclusion that the operator of a typical midrange urban beverage delivery truck will save something like \$6,000 over four years by going for a vehicle equipped with diesel power.

The accompanying chart points out that, while choice of diesel power does run the purchase price of a midsize beverage delivery truck way up and increase the monthly payments on the vehicle, consistent use of the more fuel-efficient diesel engine over the 42-month life of the truck loan cuts the diesel disadvantage to almost nothing.

As the chart points out, stretch the life of the truck out to 48

months (not an unusually high figure) and the diesel truck will deliver a handsome savings. Set the deficit in direct operating costs against the continuing savings in fuel expense, as well as maintenance expense, on the diesel truck and that truck could easily show a running profit or net saving over a 42-month life.

The accompanying chart assumes that both gas and diesel fuel prices will remain the same over the 42-month period of the loan on the new truck. A much more impressive case can be made for the selection of diesel power if it is assumed that fuel prices will continue to escalate over the next three-and-a-half years.

That is not an unreasonable assumption considering what has happened to fuel prices in recent months. However, a reputable statistician would give the following warning about any such assumption: Any time it is assumed that

gas and diesel prices will go up by, say, 10 cents a gallon, the gasoline engine gets a terrible knock. Since it is about half as fuel efficient as the diesel engine, a given price increase is about twice as disastrous for a gas engine as it is for a diesel.

Some other statistical points made in the chart call for a certain amount of elaboration. There are certain assumptions on the interest rate on the loan to buy the truck

and maturity or life of the loan on the vehicle. Whether diesel or gas, get as low an interest rate and maturity as possible. Such moves affect gas and diesel trucks equally and save money for the beverage company.

If any type of fuel is available for less than \$1.25 a gallon, the figures will have to be adjusted downward. If a firm operates in situations where trucks do a great deal of

idling, the mpg figures will have to be adjusted because it costs more to idle a gas engine than a diesel power plant.

In short, the statistics offered here can be taken as realistic, on the average, but appropriate adjustments for specific types of trucking work must be made to ensure sound figures on which to make a diesel vs. gas purchase decision.

Soft drink bottler truck demographics

Summary of body types used by soft drink bottlers 1978-1980

Type	1980		1979		1978	
	aluminum	steel	aluminum	steel	aluminum	steel
truck bodies	2453 (56.5%)	604 (13.9%)	3128 (51.1%)	1233 (20.2%)	3348 (51.2%)	1426 (21.8%)
route trailers	1076 (24.8%)	155 (3.6%)	1325 (21.7%)	346 (5.7%)	1299 (19.9%)	408 (6.2%)
transport trailers	26 (0.6%)	5 (0.1%)	63 (1.0%)	4 (0.01%)	51 (0.8%)	7 (0.1%)
misc. (all others)	12 (0.3%)	7 (0.2%)	19 (0.3%)	—	—	—
mini trailers	—	—	—	—	—	1 (0.01%)
Total Deliveries	3567 (82.2%)	771 (17.8%)	4535 (74.1%)	1583 (25.9%)	4698 (71.9%)	1842 (28.1%)

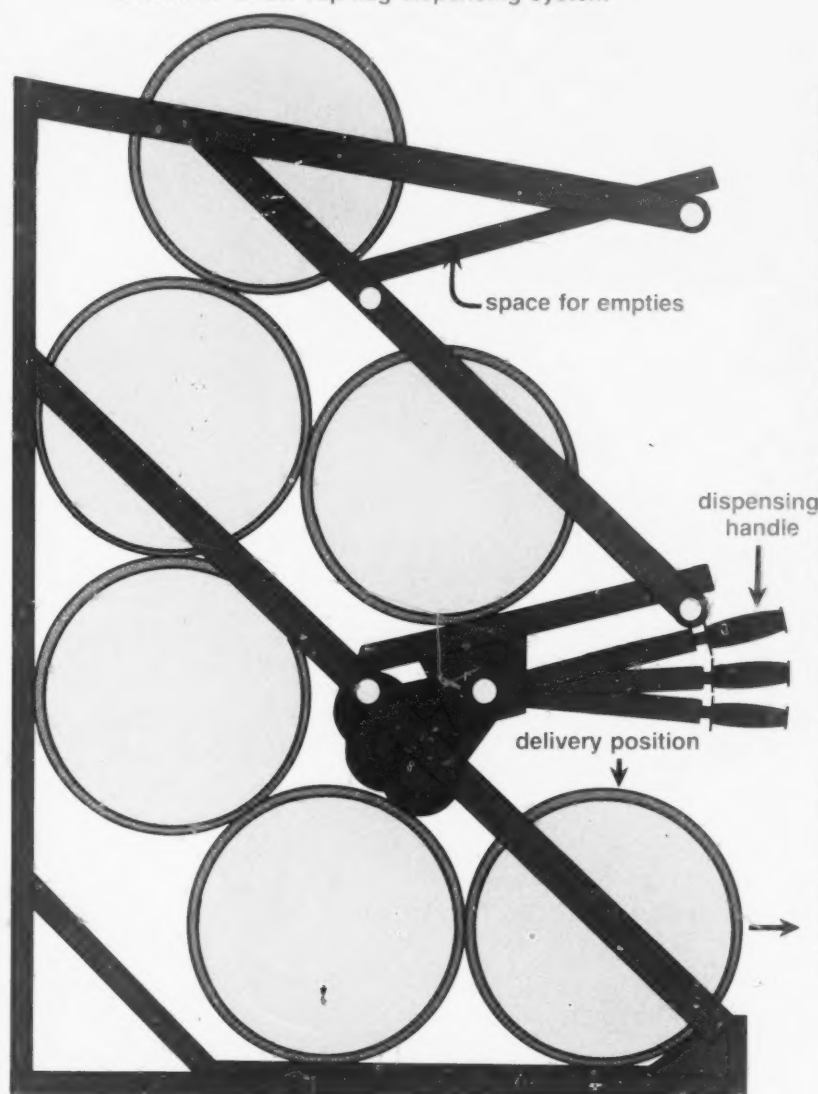
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September 16, 1981

Number of chassis by type used by soft drink bottlers 1978-1980

Model	1980		1979		1978*
	gasoline	diesel	gasoline	diesel	
Chevrolet	549 (14.8%)	226 (6.1%)	1231 (23.6%)	171 (3.3%)	1465 (29.5%)
GMC	387 (10.5%)	228 (6.2%)	867 (16.6%)	109 (2.1%)	847 (17.1%)
Ford	699 (18.9%)	555 (15.0%)	1293 (24.9%)	314 (6.0%)	1766 (35.5%)
International	499 (13.5%)	470 (12.7%)	899 (17.3%)	208 (4.0%)	808 (16.3%)
Dodge	—	—	—	—	6 (0.1%)
Other Domestic	13 (0.3%)	24 (0.6%)	8 (0.2%)	1 (0.02%)	—
Others	—	—	—	—	73 (1.5%)
All Imports	6 (0.2%)	44 (1.2%)	35 (0.7%)	66 (1.3%)	—
Totals	2153 (58.2%)	1547 (41.8%)	4333 (83.3%)	869 (16.7%)	4965 (100.0%)

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September 16, 1981

Schematic of On Tap keg dispensing system



Keg dispenser draws praise

When **Beverage Industry** contacted a number of beer distributors who have field tested the Hackney & Sons On Tap keg dispenser, it was learned that all have received favorable comments from their drivers on the unit.

Because the base of the unit is designed to function like a pallet, On Tap can be fully loaded and then lifted into the truck bay with a forklift. The unit holds up to 12 kegs, which are dispensed at waist height with the push of a lever. Drivers no longer need to crawl up into the bay and toss out kegs.

As one keg is dispensed, room is made for an empty to be loaded on in its place.

After the route is complete, the unit, loaded with empties, is withdrawn with a forklift. The empties are then removed with a few more pushes of the lever.

New keg dispensing unit may revolutionize delivery

A new keg dispensing unit with the potential to revolutionize keg delivery has been greeted with rave reviews by beer distributors field testing the new Hackney & Sons invention.

The On Tap keg dispensing unit, now on the market, is an all aluminum rack that holds up to 12 full kegs with a base designed to function as a pallet. Units can be loaded in the cold room and then forklifted into the truck

bay.

Once loaded onto the truck, kegs are dispensed at the threshold of the bay, at waist level. Drivers no longer must get up into the bay and drop a keg to the floor. Because kegs are caged in the On Tap unit, there is little risk of a keg tumbling out when the door is open.

As kegs are dispensed from the unit by a push of a lever, room is made for storage of empties. Conse-

quently, trucks become more space efficient as empties take the place of full kegs.

After route work is completed, a unit loaded with empties, can be forklifted from the bay to the warehouse for refilling.

In addition to highlighting the safety aspect of the unit, Hackney maintains that use of the rack will increase draft sales by freeing up time, allowing for more delivery stops.

Easing ingredient costs brighten profit outlook

HFCS capacity of U.S. producers

(mil. lbs. dry and liquid basis)

	1979		1980		1981		1984	
42% HFCS	Dry	Liquid	Dry	Liquid	Dry	Liquid	Dry	Liquid
Staley	725	1,021	850	1,200	426	600	426	600
Standard Brands	670	817	670	817	495	697	370	521
Amstar†	300	420	300	420	300	420	300	420
ADM	1,300	1,831	1,300	1,831	1,300	1,831	1,300	1,831
CPC#	355	500	355	500	535	750	710	1,000
Heinz (Hubinger)	390	550	300	420	300	420	300	420
Cargill, Inc.	264	371	264	371	213	300	405	571
Amalgamated Sugar-								
American Maize	250	350	250	380	380	535	380	535
Holly Sugar	100	141	100	141	100	141	100	141
Godchaux-Henderson	—	—	—	—	—	—	100	141
Great Western Sugar	—	—	30	42	30	42	165	232
Total	4,354	6,001	4,419	6,122	4,079	5,736	4,556	6,412
55% HFCS								
Staley	410	535	616	800	1,463	1,900	2,063	2,679
ADM	550	714	550	714	1,250	1,623	1,400	1,818
Standard Brands	300	366	300	366	460	597	570	740
Heinz (Hubinger)	42	60	150	195	150	195	150	195
Cargill, Inc.	—	—	—	—	308	400	616	800
American Maize	—	—	—	—	280	365	280	365
Godchaux-Henderson	—	—	—	—	—	—	300	390
Great Western Sugar	—	—	70	91	385	500	385	500
CPC#	—	—	—	—	—	—	96	125
Total	1,302	1,675	1,685	2,166	4,296	5,580	5,860	7,612
Grand Total	5,656	7,676	6,104	8,288	8,375	11,316	10,416	14,024

†In 1980, A. E. Staley will add 800 million pounds capacity, but is scheduled to remove 100 million pounds of capacity in 1981. In 1982, A. E. Staley will add 800 million pounds capacity, but is scheduled to remove 100 million pounds of capacity in 1983. In 1984, A. E. Staley will add 800 million pounds capacity, but is scheduled to remove 100 million pounds of capacity in 1985.

Source: Lehman Brothers, Rohn Loeb

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With sugar prices plummeting during the last six months, inflationary pressures due to ingredient costs may be easing enough to give bottlers some much needed breathing room.

At the end of October 1980, sugar prices were hovering around the 44 cents per pound mark. By August 1981, they were down to 16 cents per pound.

According to Beverage Industry's

director of research and statistics, John C. Maxwell Jr., reasons for the drop were many. On the supply side, stocks have proved to be higher than anticipated, Maxwell says. On the demand side, several countries have cut their sugar cane usage. For example, says Maxwell, Japan and Poland have slashed their use of sugar in order to protect their balance of payments. For its part, Japan is now on a crash

program to move away from sugar wherever possible to high-fructose or other substitutes.

"Prices rose in the first place because, among other things, there was a rust in Cuba, adverse weather in Eastern Europe and droughts in South Africa, India and Peru," Saul Kolodny, vp-economic research for Amstar Corp., American Sugar Div., told BI. He feels prices fell off in part because consump-

Sugar pricing/lb:

World Raw	8¢	16¢	20¢	25¢	30¢	35¢	40¢	45¢	50¢
U.S. Protection	7	—	—	—	—	—	—	—	—
U.S. Raw	15	16	20	25	30	35	40	45	50
U.S. Refined	21	22	27	33	39	46	53	60	67

HFCS selling prices/lb:

55-Discount	10%	19¢	20¢	24¢	30¢	35¢	41¢	48¢	54¢	60¢
	20%	17	18¢	22¢	26	31	37	42	48	54
	30%	15	15	19	23	27	32	37	42	47
42-Discount	20%	17	18	22	26	31	37	42	48	54
	30%	15	15	19	23	27	32	37	42	47
	40%	13	13	16	20	23	28	32	36	40

tion declined in the Third World, the weather turned around and Cuban replanting is succeeding in beating the rust. Also, speculators were forced out of plays in commodities like sugar because of higher interest rates.

Those phenomenal rates simultaneously served to strengthen the dollar, a development that weakened the sugar price dramatically, Kolodny says.

"Sugar was off 20 to 30 cents because of dollar strength alone," he maintains.

But Kolodny agrees with Maxwell that rebounding supplies have also played a big part in the drop of sugar prices.

"Last year, supplies were at the 86.5 million ton level, this year there may be as much as 92 million tons produced," he says. But, he warns that depends on the Western European crop. At presstime, a bumper crop was expected, with EEC acreage up 13%.

Another reason for the drop were the inroads High Fructose Corn Syrup made in the U.S. market, Kolodny says.

"In the past, the United States has consumed 10 million tons of sugar a year, but in 1981 that consumption will fall below 9.7 million tons," he says. "That's largely due to HFCS."

The move to HFCS by syrup manufacturers has been rapid, to say the least, with Coke going to 50% HFCS for canned and bottled product in January of 1980 kicking off the big switch. Pepsi of course subsequently moved to 50% HFCS for fountain use and 7UP and Dr

Pepper followed with approval of 100% usage.

"It will be six to 12 months before capacity exists to satisfy demand," Larry Cunningham, marketing director-sweeteners for A. E. Staley, says. If Pepsi approves HFCS use in bottled and canned and/or 100% fountain use, that date could be pushed back even further.

But, says Maxwell, "With sugar down to 16 cents per pound and disaster selling taking place, there seems to be little reason for Pepsi to make the change to HFCS at this time."

Has the market bottomed out? Or will it continue to drop, with sugar prices approaching the 7 cents mark attained in the middle of the last decade?

Prices, besides reflecting supply/demand curves, also reflect the production costs of the most efficient producers, in that these costs will act as a floor for the sugar price cycle, Maxwell says. "The Philippines and Brazil are low-cost producers with costs of 12-14 cents per pound. This suggests that prices will not fall below that level except for short periods of time." Maxwell predicts that over the next 12-18 months sugar prices could be in the high teens and possibly fall to production cost level or below as output catches up with consumption.

A number of factors could, however, combine to curtail rising production, thus leading to costs stabilizing or even increasing. Today, larger investments are required for sugar expansion, and less capital is

available. Capital requirements for new sugar facilities have doubled in the last five to six years, says Maxwell. High interest rates have forced some producers out of the market and encouraged a policy of low inventories, he adds. Finally, Maxwell cites gasohol production as a growing international drain on raw sugar supplies.

"Brazil is the largest producer of ethanol from cane, and other countries are using Brazil as a model," Maxwell says. "The swing factor in Brazil, i.e., cane that can be diverted from sugar into ethanol or vice versa, should be about 2 million tons by 1984-85. Approximately 60% of Brazil's facilities are flexible, in that they can produce either sugar or ethanol. Whether Brazil and other countries divert cane from sugar to ethanol depends on the relationship between OPEC oil prices and world sugar prices."

Domestically, gasohol production isn't posing the threat to corn supplies it was last year at this time. States have reduced subsidies for the construction of ethanol plants and the federal government has stopped giving loans. Declining gas prices have also taken the thunder out of the move to ethanol fuels.

"There's not much cooking," sums up Staley's Cunningham.

In any case, corn supplies look to be strong, with this year's harvest projected to exceed 7 billion bushels. Since only 6-7% of corn harvest for HFCS, corn costs don't look to put a lot of upward pressure on HFCS prices this year.

Those prices may remain 8-10% lower than comparable sugar prices for 55% HFCS, 15% lower for

	1978	1979	1980E	1981P	1982P	1983P	1984P
42% HFCS capacity	4,020	4,374	4,419	4,079	4,456	4,556	4,556
change	7.5%	8.8%	1.0%	(7.7)%	9.2%	2.2%	—
Shipments	2,400	2,900					
change	25.0%	20.8%					
Capacity utilization	59.7%	66.3%					
55% HFCS capacity	800	1,302	1,685	4,296	4,960	5,860	5,860
change	400.0%	62.8%	29.4%	155.0%	15.5%	18.1%	—
Shipments	100	600					
change	63.9%	500.0%					
Capacity utilization	12.5%	46.1%					
Total HFCS capacity	4,820	5,676	6,104	8,288	9,416	10,416	10,416
change	23.6%	17.8%	7.5%	35.8%	13.6%	10.6%	—
Total shipments	2,500	3,500					
change	26.2%	40.0%					
Capacity utilization	51.9%	61.7%					

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January 1982

World sugar production and consumption

	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81E
Europe						
Production	25.0	25.8	29.2	29.5	28.0	NA
Consumption	29.6	29.7	30.4	31.3	NA	NA
North America						
Production	6.5	6.2	5.4	5.6	5.3	NA
Consumption	10.8	11.1	11.0	11.1	NA	NA
South & Central America						
Production	24.0	25.3	27.7	26.1	24.7	NA
Consumption	13.3	13.5	14.1	14.7	NA	NA
Asia & Oceania						
Production	20.7	22.9	24.1	22.9	20.8	NA
Consumption	18.8	20.2	22.1	23.9	NA	NA
Africa						
Production	5.5	6.1	6.1	6.4	6.5	NA
Consumption	4.9	5.2	5.6	5.9	NA	NA
World*						
Production	81.7	86.3	92.5	90.4		
Consumption	79.1	81.7	85.6	89.4		
Excess (Shortfall)	2.6	4.6	6.9	1.0		

*Production and consumption figures are in million metric tons. Production in 1975-76, 2.6 million in 1976-77, 2.4 million in 1977-78, and 2.5 million in 1978-79.
Source: U.S. Sugar Association.

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January 1982

42% HFCS. The big problem for 55% HFCS, however, remains one of supply.

"In 1980, corn sweeteners captured 33% of the total U.S. nutritive sweetener market," Maxwell

says. "This share is expected to rise to 50% by 1985. Current high-fructose production represents about 28% of the corn wet milling industry, and by 1984 it is expected to be 34%. During calendar 1981 the

55% product will remain in short supply, placing this year's capacity utilization at 100%. Utilization of the first generation, 42%, product, is expected to be a strong 85% because it is somewhat substitutable

for 55%. In 1982, overall HFCS capacity utilization should be off to 87% from 89% in 1981 due to increased capacity coming on-stream." A surplus of sugar could adversely affect consumption of HFCS, Maxwell warns.

The ultimate winner of this battle between sugar and HFCS will be the bottler, who will be able to benefit from lower prices.

"Prices are going down, or flattening," Lee Kohnstamm, franchise manager for V & E Kohnstamm, Inc., says.

Demand for lemon oil was too

high last year, he contends. Prices were pushed up and "games were played" with products, he says.

Over the past few years, rising raw material prices have touched off a rush to flavor substitutes by bottlers and product quality has suffered, he says. A move to more natural flavors was wiped out, he adds.

"But now we have a chance to consolidate," Kohnstamm says. The result will be improved product quality, he predicts.

All natural flavors may also make a comeback. Actual volume

of soft drinks made with the all naturals is now quite low, but Kohnstamm notes a growing interest in that segment on the part of consumers.

Another flavor segment seeing more action is the highly concentrated market, Kohnstamm says. As more bottling operations are consolidated, leading to higher volume operations, highly concentrated flavors are bound to become more prominent. High volume operations make use of highly concentrated flavors practical and cost effective.

HFCS production costs relative to a range of corn costs

Corn Cost/bushel	\$2.40	\$2.60	\$2.80	\$3.00	\$3.20	\$3.40	\$3.60	\$3.80	\$4.00
HFCS (55) Cost/lb*	11¢	11¢	12¢	12¢	12¢	13¢	13¢	13¢	14¢
HFCS (42) Cost/lb*	10¢	10¢	10¢	11¢	11¢	11¢	12¢	12¢	12¢

*Dry basis; estimated average industry costs
Source: Lehman Brothers Kohn Loeb

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January 30, 1981

Concentrate prices and price increases between 1977 and 1981

(8 equivalent syrup gallons)

	Concentrate price*			Concentrate price increase		Percentage increase	
	1977	1979	1981	1977-79	1979-81	1977-79	1979-81
Coke	\$0.95	\$0.95	\$1.34	\$0.00	\$0.39	0%	40%
Peppi	0.62	0.87	1.13	0.05	0.26	8	30
Seven-Up	1.00	1.04	1.26	0.04	0.24	4	23
Dr Pepper	1.02	1.05	1.40	0.03	0.32	3	30
RC Cola	0.90	1.02	1.23	0.12	0.21	13	21
Sprite	\$0.94	\$1.14	\$1.40	\$0.20	\$0.26	21%	23%
Mr. PIBB	0.87	1.03	1.33	0.16	0.30	18	29
Fanta Orange	0.46	0.49	0.61	0.03	0.13	0	27
Mountain Dew	0.78	0.94	1.37	0.16	0.43	24	46
Team	0.64	1.05	1.30	0.41	0.25	64	24
Tab	\$1.94	\$2.10	\$2.40	\$0.16	\$0.30	8%	14%
Diet Pepsi	1.50	1.95	2.43	0.05	0.48	8	25
Diet Seven-Up	1.55	1.83	2.10	0.10	0.42	9	25
Sugar-Free Dr Pepper	1.57	1.97	2.25	0.10	0.28	6	14
Diet Rite	1.63	2.03	2.26	0.39	0.24	5	12

* Since different soft drinks generally have somewhat different amounts of sweetener per unit volume of product, the relative concentrate prices between brands are not strictly representative of relative syrup costs.
* An equivalent syrup gallon corresponds to 33.2 oz. of finished product.
* As of January 1st of the year shown.

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Jan. 24, 1981

Restrictive tax and deposit laws

state	effective date	provisions	definition of "beverage"
Calif.	Jan. 1, 1979	—Bans pull-tabs —The Secretary of the Resources Agency may grant permission to a manufacturer to sell "flip-top" containers for one or more periods of time for a total period not to exceed Jan. 1, 1980.	Beer, malt beverages, mineral waters, soda water and carbonated soft drinks
Conn.	Jan. 1, 1980	—Minimum 5¢ deposit —1¢ handling fee —Ban on pull-tabs —Permits retailers to refuse to accept containers if a redemption center is located within 1 mile of their place of business —Provides for establishment of private redemption centers	Beer, malt beverages, mineral and soda waters and similar soft drinks
Hawaii	Jan. 1, 1979	—Bans pull-tabs —Bans plastic containers —Empowers the Director of the Dept. of Health to do the following: • coordinate state and local agencies to aid anti-litter efforts • implement study of available research on litter control, prevention, removal, disposal and recycling, and, ultimately, the implementation of those programs —Provides that \$300,000 be appropriated from the General Fund to implement the Law	Beer, malt beverages, mineral waters, fruit juices, ades and other similar non-carbonated drinks, soda water and flavored carbonated drinks
Iowa	Aug. 1, 1979	—Implemented by the Director of Environmental Quality —5¢ minimum deposit —1¢ handling fee for the first two years — ½¢ thereafter —Ban on pull-tabs —Deposit on liquor containers became effective May 1, 1979 —Refund value must be clearly stated on and securely affixed to each container; minimum size of notice to be determined by the Dept. of Environmental Quality —Provides penalties for violation of the Act —Provides for establishment of private redemption centers	Alcoholic beverages and beer, as defined in the Iowa Code, mineral water, soda water and similar carbonated soft drinks
Maine	Jan. 1, 1978	—5¢ minimum deposit —1¢ handling fee —Labeling requirements — refund value	Beer, ale, other fermented drinks, soda water, non-alcoholic carbonated drink

(Continued)

Restrictive tax and deposit laws

state	effective date	provisions	definition of "beverage"
Maine (Continued)		- must be clearly stated by embossing, stamping, labelling or other method —Bans pull-tabs —Bans non-biodegradable Hi-Cone holders —Provides for the establishment of redemption centers —Determines penalties for littering —Requires that litter receptacles be placed in all public establishments	
Mass.	June 1, 1979	—Bans pull-tabs	Malt beverages, carbonated soft drinks
Mich.	Dec. 3, 1978	—Minimum 5¢ deposit on "certified" containers; 10¢ on all others —Bans pull-tabs —Labelling requirements — refund value must be clearly embossed, stamped or otherwise affixed to the container —Provides container certification standards —Requires that dealers selling beverages for off-premises consumption provide a convenient means by which containers can be returned, and the deposit refunded. —Provides for the establishment of regional redemption centers	Soft drinks, soda water, carbonated natural or mineral water, or other non-alcoholic carbonated drinks; beer, ale or other malt drinks of whatever alcoholic content
Minn.	Jan. 1, 1977	—Bans pull-tabs	Carbonated soft drinks, beer, malt beverages or tea (originally written to include non-carbonated soft drinks as of May 20, 1977)
Oregon	Oct. 1, 1972	—2¢ minimum deposit on "certified" containers, as identified in the Act, 5¢ on all others —Bans pull-tabs (the pull-tab provision has been amended to include non-carbonated soft drinks as of March 1, 1979) —Bans Hi-Cone holders which will not decompose within 120 days of disposal, either by chemical degradation, biodegradation or photodegradation —Refund value of container must be clearly indicated on the container, by embossing, labelling, stamping or other method —Contains certification provisions for containers	Beer or other malt beverages and mineral waters soda water and similar carbonated soft drinks

(Continued)

Restrictive tax & deposit laws

state	effective date	provisions	definition of "beverage"
Oregon (Continued)		—Provides for the establishment of redemption centers — subject to the approval of the Oregon Liquor Control Commission	
South Carolina	May 5, 1978	—Implemented by Dept. of Health & Environmental Control —Bans pull-tabs after July 1, 1980; covers "... carbonated soft drinks or malt beverages in a metal container . . ." —Establishment of Litter Control Account to control grants and contributions received in conjunction with the Act —\$500,000 initial appropriation from the state for implementation of the Act —Allows annual appropriation by the General Assembly —Prohibits littering and provides penalties —Coordination of local anti-litter efforts	Malt beverages carbonated soft drinks
Vermont	July 1, 1975	—Minimum 5¢ deposit —Bans pull-tabs and non-biodegradable Hi-Cone holders, effective Jan. 1, 1977 —Requires that a 20% handling fee be paid to redemption centers (retailers or others) by the manufacturer or distributor —Provides for the establishment of redemption centers —Leveling a tax of 4 mills per container of "venous and spiritous" beverages —Includes provision for a public education program relating to the deposit law —Labelling requirements — "Vermont" and the refund value must be indicated on the container by either imprinting or embossing the product label; does not apply to certified containers (effective Sept. 1, 1975)	Beer or other malt beverages and mineral waters, soda water and carbonated soft drinks
Virginia	Jan. 1, 1979	—Bans pull-tabs (covers all beverages) —Beer regulated by Virginia Alcoholic Beverage Control Board; other beverages regulated by the Virginia Dept. of Agriculture	Originally interpreted by the Dept. of Agriculture to cover all beverages, except water — amended June 15 to cover only "soft drink cans and beer cans . . . until the General Assembly establishes a new effective date to apply to all beverage containers."

International sales

Soft drink, juice sales suffer setbacks in Japan

Japan's 1980 soft drink sales

(cases)

	1980			Jan. '80	Jan. '81	% change
	Bottle	Can	Total			
Club soda	4,378,143	4,149	4,883,402	260,654	332,456	(3.1)
with milk	823,551	3,792,794	4,616,345	1,177,034	1,365,564	(10.3)
with juice	287,256	1,458,579	1,745,835	59,275	128,292	(116.4)
Sub-total	1,110,807	5,251,373	6,362,180	1,236,309	1,493,856	(4.2)
Grape	16,564,267	8,960,422	25,524,689	1,350,654	1,120,980	(17.0)
Orange	26,509,616	11,947,018	38,456,634	2,187,649	1,671,905	(23.6)
Apple/other	7,167,116	5,230,785	12,397,911	390,612	426,612	9.2
Sub-total	50,540,999	26,138,235	76,679,234	3,929,315	3,219,707	(18.1)
Cola	92,527,026	32,494,032	125,021,058	8,444,235	8,346,599	(21.7)
Lemon/Lime	58,654,074	18,158,956	77,011,030	5,242,226	5,471,729	4.4
Others	3,330,116	646,541	3,976,657	158,857	225,851	42.2
Sub-total	154,711,219	51,297,529	206,008,748	11,845,318	10,744,189	(9.3)
Total	211,242,278	82,691,206	293,933,564	17,271,596	15,400,209	(10.8)

Source: Japan Fruit Juice Assn.

Copyright: Beverage Industry
June 26, 1981

Not only have unfavorable weather conditions in the high consuming months in 1979 and 1980 adversely affected soft drink sales in this country, they have also hurt fruit juice and fruit drink consumption.

Soft drink sales continued declining into early 1981. Total soft drink consumption was at 17.3 million cases in January '80, but fell to 15.4 million cases in January of this year.

About 50,000 tons of Mikan (Mandarine or Satsuma) fruit juice/drink concentrate surplus was carried over to this year. Mikan holds a 79% market share in the fruit juice/drink market here. Apple has a 16% share, sour orange has 4% and grape 1%. Mikan concentrate production in '81 is estimated at 67,000 tons. Only 62,000 tons of the concentrate was used in '80, so the industry is expected to continue to suffer from heavy inventory this year.

The total yearly apple crop has stabilized at 850,000 to 900,000 tons in the past several years.

Per-capita consumption of juice/drink

	'78	'79	'80	'81
Total	1.40	1.31	1.40	1.40
Soft drink	1.27	1.16	1.26	1.26
Fruit juice	1.03	1.15	1.15	1.15
Apple	0.37	0.32	0.29	0.31
Grape	0.18	0.18	0.20	0.21
Others	0.35	0.35	0.32	0.32
Sub-total	10.27	12.17	14.33	15.13
Total	11.25	13.48	15.82	16.59

Source: Japan Fruit Juice Assn.

Copyright: Beverage Industry
June 26, 1981

About 19,500 tons of apple concentrate was produced in 1979/'80, of which 14,700 tons is in the form of cloudy type and the remaining of clear type product. The import of apple concentrate of 3,500 tons in '79 and 4,000 tons in '80 met with local demand, but no allocation is expected in '81 because of a heavy carry-over from '80.

About 100,000 tons of grape is processed into concentrate out of the total crop of 350,000 tons. The

import of 2,000 tons in '78, 1,500 tons in '79 and 1,800 tons in '80 was carried out under a special import quota to meet with local demand. Concord-type grape juice is the most popular type here, and the imported product comes principally from the United States.

Approximately 1,000 tons of pineapple concentrate were produced in the southern islands but the quality is poor and the price is prohibitive, which makes the con-

Production of fruit juice concentrate

Category	1975	1976	1977	1978	1979	1980
Mikan	48,644	50,830	70,498	55,051	99,217	55,000
Sour orange	3,276	3,591	3,439	2,472	4,993	3,000
Apple	15,409	12,153	16,883	17,446	20,509	20,000
Grape	1,288	627	1,041	1,008	1,583	1,600
Total	68,617	67,201	91,861	75,977	126,302	79,600

Source: Japan Fruit Juice Assn.

Copyright: Beverage Industry
June 26, 1981

1980 fruit juice/drink production

(Kls)

Fruit category	Production	Market share
Mikan / Orange	952,000	65
Apple	174,000	12
Grape	60,000	4
Peach	57,000	4
Pineapple	37,700	3
Grapefruit	37,200	3
Lemon	34,600	2
Others	124,000	7
Total	1,476,500	100

Source: Japan Fruit Juice Assn.

Copyright: Beverage Industry
June 26, 1981

Soft drink consumption in Japan

(1,000 kl)

Category	1978	1979	1980P	1981E
Cola	1,255	1,166	983	1,068
Lemon/lime	1,146	1,100	910	980
With juice	130	140	97	104
Flavored	676	715	599	647
With milk	35	45	47	51
Club soda	43	44	42	44
Others	35	37	43	50
Total	3,320	3,247	2,721	2,944
Change	7%	2%	6%	8%

Copyright: Beverage Industry
February 27, 1981

Market share change by container types

Year	Glass Bottle	Metal Can	Paper and Others
1975	41.6	47.5	10.9
1976	42.3	45.7	12.0
1977	44.9	42.4	12.7
1978	45.5	40.0	14.5
1979	44.7	37.0	18.3
1980	43.5	34.5	22.0

Source: Japan Fruit Juice Assn.

Copyright: Beverage Industry
June 26, 1981

concentrate difficult to use. Hence, 2,000 tons of grapefruit concentrate were imported last year and an importation of 3,000 tons is expected in '81.

concentrate use

Out of the 67,200 total tons of concentrate used in '79, 35% is used for 100% juice product and the remaining 65% is used as raw materials to make soft drinks.

According to the Japan Soft Drink Bottlers' Assn., the per-capita consumption of 100% juice is showing a low figure compared to other developed countries. However, juice containing drinks mainly of the noncarbonated variety is high. Noncarbonated fruit drinks represent about 30% of the total soft drink consumption in this country.

In terms of packaging, the use of paper containers, such as Tetrapack and Purepack, has been steadily increasing, having doubled in five years. The metal can has shown a definite decline — market share in '75 was 47.5 and last year it was 34.5. The glass bottle has shown good growth, though it's had its ups and downs.

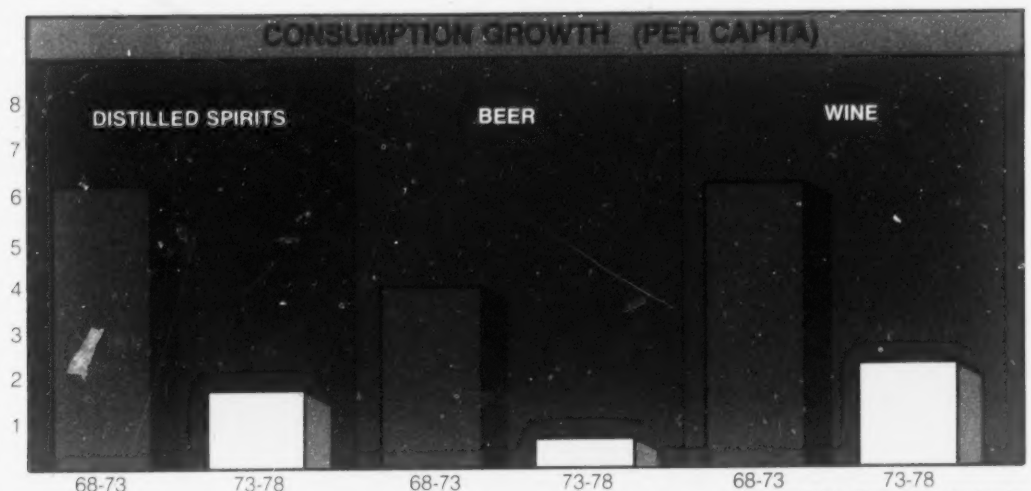
Percent of personal income spent on alcoholic beverages

Country	Percentage
Ireland	12.6%
Hungary	11.6
Poland	11.5
Soviet Union	9.0
Portugal	8.1
United Kingdom	7.8
Yugoslavia	7.0
Australia	6.3
Finland	5.7
Sweden	4.7
Belgium	3.5
Canada	3.5
West Germany	3.0
Japan	3.0
France	2.3
Italy	2.3
United States	1.4

Source: The Wine Trade

Copyright: Beverage Industry

Worldwide alcohol use growth rate down: study



Source: R. G. Shonker & Associates

Copyright: Beverage Industry
July 24, 1981

The growth of per capita alcohol consumption is slowing significantly throughout the world, but changing consumption patterns are nevertheless expanding certain markets, according to the most recent Quarterly Beverage Alcohol Report published here.

Titled "International Demand Dimensions of Wine, Beer & Distilled Spirits: The Foreign Opportunity," the report — first in a series of three related reports on international trade — is the work of R. G. Shonker & Associates International.

Beverages holding down small market shares in particular countries are finding consumers turning to them more frequently, claims Shonker. For example, Northern and Southern Europeans are drinking more spirits — in the North, the gain in spirits is at the expense of beer, while in the South, it's at the expense of wine.

"These changes are leading to a gradual lessening of the gross differences among consumption pat-

terns of the various countries," the report says. "We think that this signifies a widening of traditional tastes. The implication of this is that opportunities for trade are gradually rising . . ."

How can the distiller, vintner or brewer take advantage of these openings? That's a tricky problem, because with the shrinking growth rate of per capita consumption, there's little room for error.

"This diminishing growth cuts across both beverage types and geographic areas," says the report. In other words, among the 17 countries surveyed, average growth rates of per capita consumption of all three alcohol beverages has been slowing (see chart).

For example, from 1968 to 1973, the average compound growth rate (ACGR) in per capita consumption of distilled spirits was 6.2%. Between 1973 and 1978, it fell to 1.7%.

For beer, the comparable ACGR's were 3.9% and 0.6%. For wine — 6.2% and 2.2%.

In terms of an overall picture, between 1968 and 1973, the ACGR for per capita pure alcohol consumption was 3.9%, but in the following five years it slowed to 0.4%, only one-tenth its previous value.

overall slowdown

And the slowdown is not localized or regionalized, it shows up in virtually every country surveyed.

Countries in which per capita consumption had been rising very rapidly showed a marked moderation in the second period, while countries with slow growth between 1968 and 1973 showed even slower growth during the next five years.

The successful international companies of the future will be those which adjust their marketing activities to these realities, Shonker suggests.

Companies will have to locate special niches; purchases will have to be made of brands and companies with hidden potential, he adds.

In other words, "the merger and

acquisition movement in the industry will continue, with the market dominated by fewer, larger firms

Markets in some countries are still showing some strength.

Poland offers the most rapidly expanding spirits market (volume-wise), followed by the United States, the Soviet Union and Spain. It might sound strange that the United States is considered an expanding spirits market in light of the well-publicized slowing in spirits growth during the past several years. But sheer market size assures it of a top-ranking on a volume-related growth list.

Sheer market size alone would have landed the United States on Shoniker's growth lists for wine and beer, too. But in these cases, the situation is even more encouraging, as percentage growth

matches or exceeds those in most other countries.

In fact, the United States leads the volume growth lists for beer and wine. Second on the beer list

is the Soviet Union, followed by England, Japan, Spain and Brazil.

Second on the wine list is Argentina, Australia, Czechoslovakia and England.



EEC beer consumption to rise in '80's: study

Beer consumption in the European Economic Community will increase by 16% in the next decade, predicts a recently completed study of the European beer market.

That consumption will rise from an estimated 243 million hectolitres in 1980 to 281 million hl by 1990, according to a 342-page report by Frost & Sullivan, Inc., *Beer and Beer Packaging Market in Europe* (Report #E360).

Among individual nations, the Netherlands will compile the

strongest percentage gain, with consumption projected to advance by 56%, followed closely by Italy at 50%. The EEC's No. 2 beer drinking nation, the United Kingdom, is targeted for a healthy 18% climb. But in No. 1 Germany, although there's no danger of the country losing its top ranking, there will only be a 4% increase.

Because one-third of the beer drunk in the EEC is consumed at home, Frost & Sullivan sees this sector as the scene of a major clash

for market share during the 1980s.

Yet market penetration of packaged beer runs the gamut from 9% in Ireland to 96% in Italy, with draught beer predominating in England as well as in Ireland. And while there is room for growth for consumption generally in the U.K., the Netherlands, Italy, Denmark and France, Belgium and Ireland seem to be approaching the saturation point already arrived at by Germany.

The overwhelming choice for packaged beer in the EEC continues to be the glass bottle, says the report. Canned beer holds an 8% market share in the U.K., but its slice in the other countries is as thin as 0.3%. Pressures from environmentalists for returnable packaging should help the glass bottle to maintain its dominance, the report adds.

"Low-calories or lite beers may develop a curiosity value, but little more in international terms over the next ten years," the report says.

For further information, contact Customer Service; Frost & Sullivan, Inc.; 106 Fulton St.; New York, NY 10038, tele. (212) 233-1080.

Europe beer production by country				
Country	Production (hl)	Market Share (%)	Production (hl)	Market Share (%)
Belgium	5,942	43.0%	7,877	57.00
Denmark	711	8.3	7,823	91.67
Germany	27,752	29.4	66,595	70.59
France	4,473	19.6	18,298	80.36
Ireland	5,138	90.8	524	9.25
Italy	292	4.0	7,008	96.00
Luxembourg	285	41.0	410	58.99
Netherlands	3,854	27.6	10,116	72.41
U.K.	51,015	78.2	14,222	21.80
Total	99,462	42.8	132,873	57.19